

NEC

SILENTWRIT 1700
series

**1765 Network Printer
Configuration Guide**

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USING THIS GUIDE



This guide includes the information you need to prepare and operate your NEC® Silentwriter® 1765 for network printing. This guide contains information about network utilities and configurations only. Please refer to the *User's Guide* for general operating information. The seven chapters of this guide are described below.

Chapter 1, “Introduction”

- Provides an overview of the Silentwriter 1765 networking capabilities and features.
- Includes system and software requirements for network printing with the Silentwriter 1765.

Chapter 2, “1765 Set Up”

- Shows how to upgrade your 1760 to a 1765 by installing your new LAN (Local Area Network) Card and extra RAM.
- Tells how to prepare your printer for network installation.

Chapter 3, “Installing NEC 1765 Software”

- Provides instructions for installing the NEC 1765 software you'll use to operate your printer on the network.

Chapter 4, “Configuring Your Network Printer”

- Provides information about adding the Silentwriter 1765 to your network.
- Tells how to configure both network and printer to work together.

Chapter 5, “NEC 1765 Administration Software”

Shows how system administrators can use NEC 1765 Administration software to

- Configure the network
- Set printer parameters
- Supervise the network

Chapter 6, “NEC 1765 Client Software”

Shows how 1765 users can use NEC 1765 Client software to

- Set printer parameters
- Monitor user print requests

Chapter 7, “If You Need Help”

- Contains sources of technical support. For general problem solving see Chapter 8, “Troubleshooting,” in the *User's Guide*.

If you have not yet set up your printer, begin with the *Easy Printer Setup Guide*. It covers assembly, installing printer options, and installing printer driver software.

See the *User's Guide* for information about operating and maintaining your printer, and using printer driver software.

INTRODUCTION 1



Overview

This chapter provides the following information about the Silentwriter 1765.

Features: Lists the features of the Silentwriter 1765 (or an upgraded Silentwriter 1760)

Compatibility: The Silentwriter 1765 can work with several different operating systems and network operating systems. This section describes the system requirements for using the 1765 with each platform.

Qualifications and Assumptions: The instructions provided in this guide assume that you have basic working knowledge about your computer networks. This section further describes these assumptions.

Where to Go Next: Lists the steps you'll need to complete to set up and operate the Silentwriter 1765 and where to find the information you need.

Features

You may already be familiar with the benefits of the Silentwriter 1760—its speed, ease of use, and high quality output. The networking capabilities of the Silentwriter 1765 enhance this usefulness. The 1765 network printer has the following features in addition to the standard features of the 1760.

- Runs with several operating systems and network operating systems including NetWare®, Microsoft® Windows® 3.1x, Microsoft Windows for Workgroups® (WFW), Microsoft Windows NT®, Microsoft Windows® 95, UNIX®, Mac™ OS 7.1 or greater, and IBM® OS/2® with Microsoft LAN Manager®, IBM WARP Server®, or IBM LAN Server®.
- Provides three network ports in addition to the Silentwriter's bidirectional parallel port
 - Thin wire coaxial Ethernet® (10Base2)
 - Unshielded twisted pair Ethernet (10BaseT)
 - LocalTalk®
- Network printing does not increase the Silentwriter's size because the LAN card is installed inside the 1765.
- Uses flash-ROM, a rewritable memory that allows users to upgrade LAN card firmware.
- Supports several frame types, including IEEE 802.2, IEEE 802.3, Ethernet_II, and Ethernet_SNAP.

System administrators and network clients can use NEC 1765 software to simplify setting up and operating the Silentwriter 1765. The NEC 1765 Administration software allows network administrators to define the network and manage the printer. Administrators can

- Display a list of printers on the network
- Change printer names
- Monitor printer status
- Check printer configuration
- Toggle operation between network and remote printer modes (NetWare only)

NEC 1765 Client software allows users to

- Confirm or delete their own print jobs
- Monitor printer status
- Check printer configuration

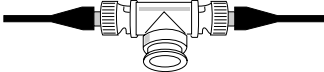
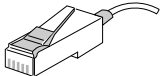

Compatibility

The Silentwriter 1765 can be used on several different platforms and operating systems. This section describes the system requirements to run the Silentwriter 1765 in different hardware and software environments.

Hardware Requirements

Table 1-1 describes the cables and connectors you need to connect to different networks.

Table 1-1: Cables and Connectors

Network Type	Cable Type	Connector Form
Thin Ethernet	Thin Ethernet coaxial cable (10Base2)	
UTP Ethernet	Twisted pair cable (10BaseT)	
Apple® LocalTalk	Mini-DIN 8 (LocalTalk shielded cable)	

Software Requirements

Table 1-2 shows the operating systems and network software you will need to configure the Silentwriter 1765.

In addition to your network software, the Silentwriter 1765 comes with software to help administer your Silentwriter across the network. Table 1-2 shows which configurations are supported by NEC 1765 software.

Table 1-2: Software Requirements

To use this network protocol	with this operating system	you will need this network software	This NEC 1765 software is available
IPX/SPX	MS-DOS®	Client software for NetWare version 3.11, 3.12, <i>or</i> 4.1	
	MS-DOS and Windows 3.1x	Client software for NetWare version 3.12 <i>or</i> 4.1	NEC 1765 Administration and NEC 1765 Client for NetWare
	MS-DOS and Windows for Workgroups 3.11	Client software for NetWare version 3.12 <i>or</i> 4.1	NEC 1765 Administration and NEC 1765 Client for NetWare
	Windows 95	network software included with Windows 95 system software	NEC 1765 Administration and NEC 1765 Client for NetWare
TCP/IP	MS-DOS and Windows 3.1x	a third party TCP/IP stack, for example, Chameleon by NetManage, Inc. (for Windows 3.1x) or LAN Workplace by Novell®	NEC 1765 Administration and NEC 1765 Client for TCP/IP
	MS-DOS and Windows for Workgroups version 3.11	network software included with Windows for Workgroups system software	NEC 1765 Administration and NEC 1765 Client for TCP/IP
	Windows 95	network software included with Windows 95 system software	NEC 1765 Administration and NEC 1765 Client for TCP/IP Windows 95 Printing System
	Windows NT version 3.1 <i>or</i> 3.5x (server or workstations)	network software included with Windows NT system software	NEC 1765 Administration and NEC 1765 Client for TCP/IP
	UNIX	any System V or BSD compatible system	
DLC	Windows NT	Windows NT Advanced Server 3.1 <i>or</i> Windows NT Server 3.5x <i>or</i> Windows NT Workstation 3.5x	

Table 1-2: Software Requirements (Continued)

To use this network protocol	with this operating system	you will need this network software	This NEC 1765 software is available
EtherTalk®	Mac OS version 7.1 or greater	network software included with Mac OS system software	NEC 1765 software for AppleTalk®
LocalTalk®	Mac OS version 7.1 or greater	network software included with Mac OS system software	NEC 1765 software for AppleTalk
NetBEUI	MS-DOS and Windows	Microsoft LAN Manager version 2.1 <i>or</i> 2.2	
	OS/2 Warp version 3.0	IBM LAN Server version 3.0 <i>or</i> 4.0 <i>or</i> IBM Warp Server version 4	

Qualifications and Assumptions

This guide assumes that you are familiar with your system and network layout. Installing the LAN card and adding the Silentwriter 1765 to your network will be easier if you

- have used your network operating system
- have the proper network software
- have a fully operational system

In addition, to complete installation and configuration on the network you must have access to the supervisor account, or have access to an account that has supervisor and print server operator privileges.

Where to Go Next

The rest of this document describes the tasks necessary to complete network installation of the Silentwriter 1765. You will need to complete the following steps:

1. Set up the Silentwriter 1765 or upgrade the Silentwriter 1760. See Chapter 2, “1765 Set Up.”
2. Install the NEC 1765 Administration software and NEC 1765 Client software. See Chapter 3, “Installing NEC 1765 Software.”
3. Connect the Silentwriter to your Network. See Chapter 4, “Configuring Your Network Printer.”
4. Use NEC 1765 Administration software to configure the network and printer. See Chapter 5, “NEC 1765 Administration Software.”

Once the Silentwriter has been connected to the network and configured properly, users can use NEC 1765 Client software to manage individual printing jobs. See Chapter 6, “NEC 1765 Client Software.”

1765 SET UP 2



Overview

This chapter describes how to prepare your new Silentwriter for network printing. It contains the following information.

- Upgrading from the 1760
- Connecting and verifying the Silentwriter 1765

We assume that you have completed the steps described in the *Easy Printer Setup Guide*.

If you are upgrading your 1760, begin with the next section.

If you are ready to connect your Silentwriter 1765, proceed to page 2-8.

Upgrading from the 1760

Upgrading a 1760 printer to a 1765 network printer requires the following steps.

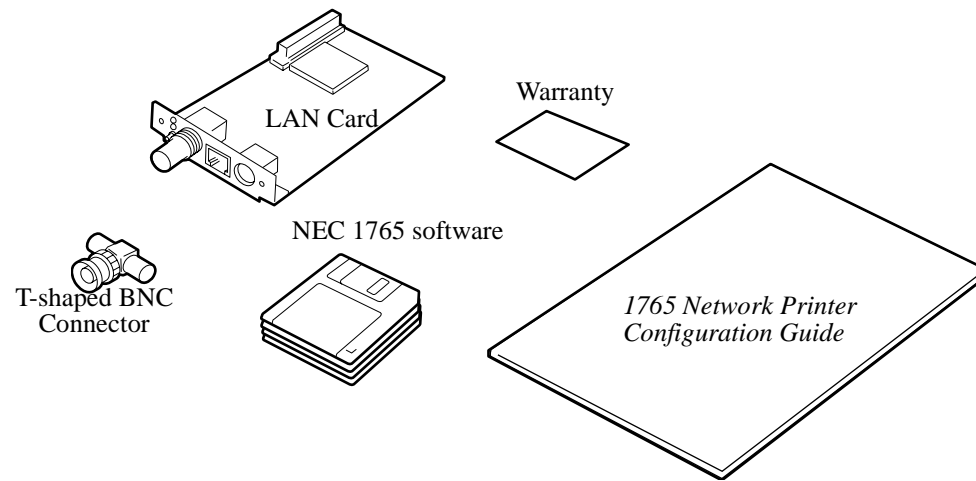
1. Unpack the upgrade kit and verify its contents.
2. Install extra RAM (not included).
3. Install the LAN card.

Unpack the 1760 Upgrade Kit

Your upgrade kit should include the following components

- LAN card (part 805-874292-003A)
- *1765 Network Printer Configuration Guide* (part 808-875036-001A)
- Four NEC 1765 software diskettes (part 819-058006-000)
 - Windows® 95 Printing System and OS/2® Support Software (part 819-055006-000)
 - Network Utilities: NetWare® for Windows® (part 819-055006-001)
 - Network Utilities: TCP/IP for Windows® (part 819-055006-002)
 - Network Utilities: AppleTalk® for Mac™ OS (part 819-055006-003)
- T-shaped BNC connector (for 10 Base2 network connections)
- Warranty card (part 819-300017-000)

Silentwriter 1760 Upgrade Kit Contents



Install RAM

The Silentwriter 1765 has two Single Inline Memory Module (SIMM) slots that support 72-pin with parity (36 bits) industry standard RAM SIMMs, available from many third party vendors. NEC recommends RAM speeds of 70 nanoseconds or faster. 1, 2, 4, 8, 16 and 32 MB SIMMs are available, and you can add up to 48 additional MB of RAM. The 1760 comes with 4 MB as standard equipment. The Silentwriter 1765 requires a minimum of 6 MB for network printing. To upgrade a 1760 to a 1765 you need to purchase and install at least 2 additional MB for a minimum of 6 MB.

To see how much memory is already installed, print a test page.

1. On the operator panel, press the **Online** button to turn the indicator light off and take the printer offline. The display changes from **READY** to **NOT READY**.
2. Press **Menu**. **PAPER HANDLING** appears on the display.
3. Press **Next** five times until **TEST PRINT** appears on the display.
4. Press **Select**. **TEST PRINT TEST PAGE** appears on the display.
5. Press **Select** to print the test page.
6. Press **Online** to put the printer back online.

Follow these steps to install a SIMM, as illustrated on the next page.

Caution! Take the following steps to protect the main controller board while installing RAM.

- Hold the board by its edges to avoid touching the connectors or components.
- Do not use magnetic tools when handling the board.
- Wear charge-dissipative straps and work on antistatic surfaces while handling the main controller board.
- Avoid carpets in cool, dry areas where static may build up.

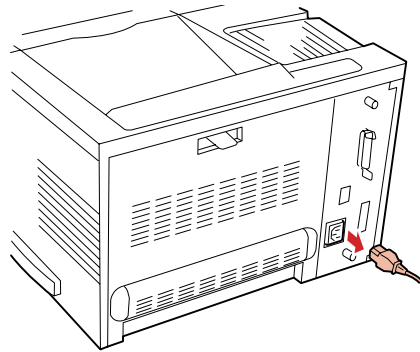
1. Turn off the printer power and unplug the power cord.
2. Detach the power cord from the printer **(A)**.

WARNING! Hazardous voltages are present in the printer when the power is on. Always turn off the printer power and unplug the power cord before accessing the main board.

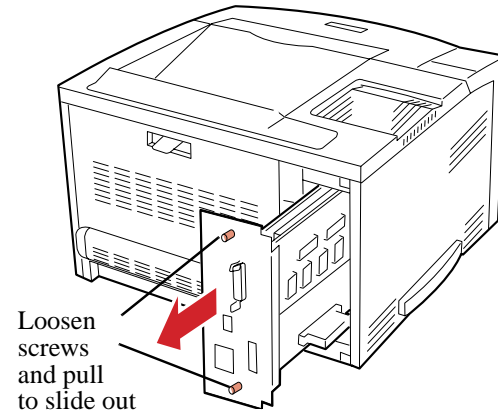
3. Loosen, but do not remove, the two finger tight screws fastening the main controller board to the printer. Using the loosened screws as handles, gently slide the main controller board out of the printer **(B)**.
4. Hold the module so that the notch is on the left side and the metal edge faces toward the memory socket **(C)**.
5. Hold the module at a 30 degree angle and firmly push it into the socket. Push the module into the back of the socket to fully seat it. Then, rotate the module up. You will feel and hear a “click” when the module snaps into place **(D)**.

Install a RAM Memory Expansion Module

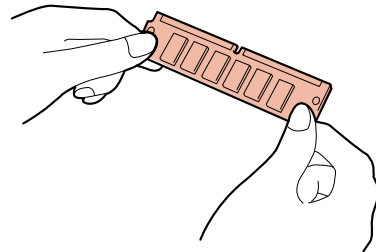
A



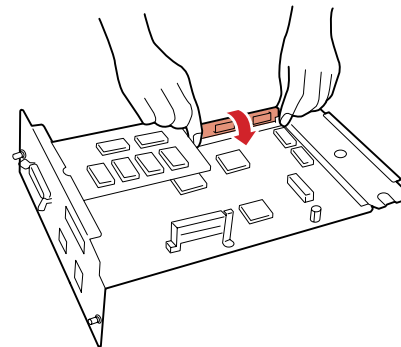
B



C



D



Install the LAN Card

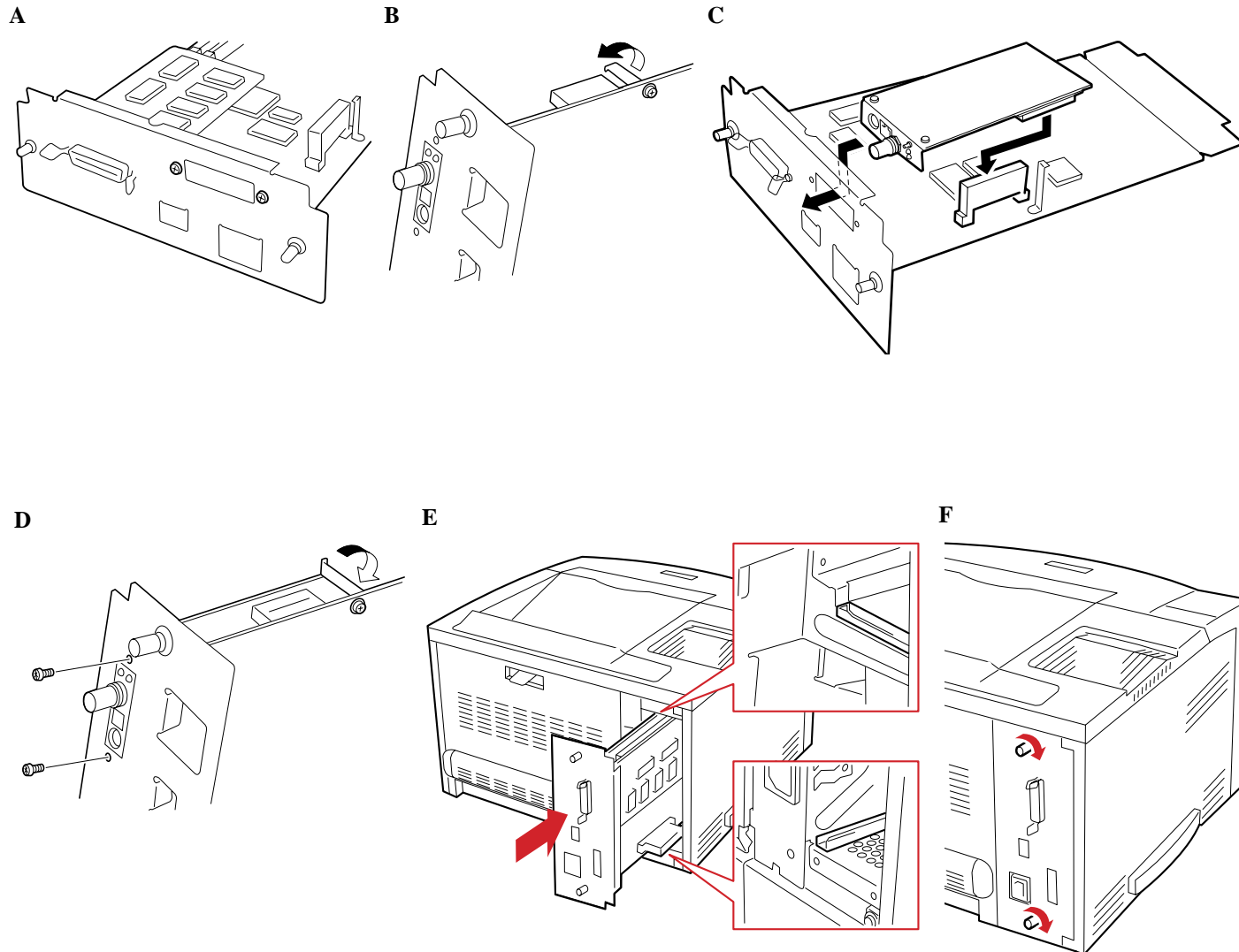
Follow these steps to install the LAN card, as shown on the facing page.

Caution! Take the following steps to protect the main controller board while installing the LAN card.

- Hold the board by its edges to avoid touching the connectors or components.
- Do not use magnetic tools when handling the board.
- Wear charge-dissipative straps and work on antistatic surfaces while handling the main controller board.
- Avoid carpets in cool, dry areas where static may build up.

1. Place the main controller board flat on a table so that the LAN card socket and bracket are on top **(A)**.
2. Rotate the LAN card bracket 90 degrees **(B)**.
3. Slide the LAN card onto the main controller board, so that the LAN card plugs into the main controller board and the LAN card panel fits through the main controller board **(C)**.
4. Insert the LAN card screws into the main controller board panel above and below the LAN card panel. Tighten the screws finger-tight. Rotate the LAN card bracket 90 degrees so that it supports the LAN card **(D)**.
5. Slide the main controller board back into the printer. Make sure the board is positioned between the rails inside the printer **(E)**.
6. Tighten the two screws finger-tight to fasten the main controller board to the rear of the printer **(F)**.

Install the LAN Card



Connecting and Verifying the Silentwriter 1765

This section describes the steps to connect the network cable to your 1765 and verify its operation. The steps are

1. Identify the LAN card panel.
2. Connect the network cable.
3. Turn on the printer.
4. Print a configuration page.

After completing the tasks in this section you will be ready to install NEC 1765 software and connect the Silentwriter to your network.

Identify the LAN Card Panel

The diagram shows the LAN card panel and its components

Configuration Button: Use this button to print a configuration page or restore the LAN card to its factory default settings.

Green LED: Lights up when the Silentwriter is receiving a packet or downloading flash-ROM information

Red LED: Lights up when transmitting a packet

Printing a Configuration Page

To print a configuration page, turn on the printer and press the configuration button. For more information about the configuration page, see “Print a Configuration Page” on page 2-13.

Restoring Factory LAN Card Settings

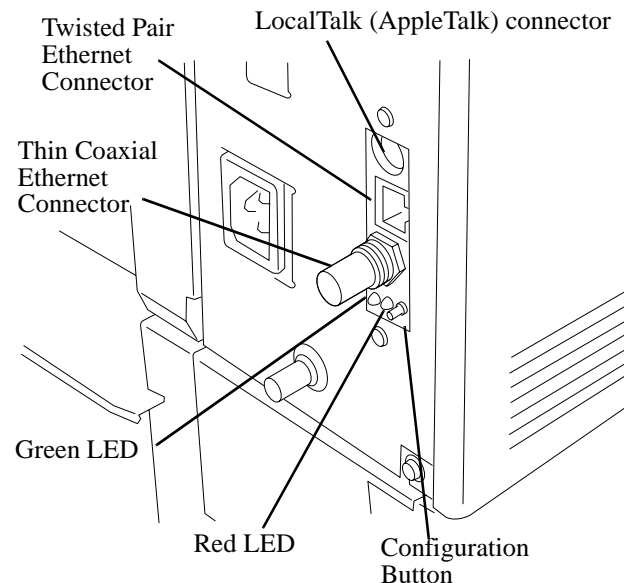
You can use the configuration button to restore the LAN card to factory default settings.

Caution! Any custom settings will be lost when you restore factory default settings. Before restoring, print a configuration page so you have a record of custom settings.

To use this button as a reset button

1. Turn the power off.
2. Press and hold the button.
3. Turn the printer power on.
4. Continue to press the button for at least 15 seconds.
5. Release the button.

LAN Card Panel



Connect the Network Cable

Before connecting any cables make sure your printer is turned off. The LAN card has three cable ports, two for Ethernet networks and one for LocalTalk networks. If you have an Ethernet network, you may use either thin coaxial cable or twisted pair cable to connect the 1765 to your network. Your Silentwriter uses Automatic Interface Monitoring (AIM) to determine which interfaces are connected. For more information about AIM, see the *User's Guide*.

WARNING! Turn the printer off before connecting any network cable.

WARNING! Using both Ethernet connectors simultaneously could result in errors while transmitting and printing data. Connect only one Ethernet cable type at a time. You may connect one Ethernet connection and LocalTalk at the same time.

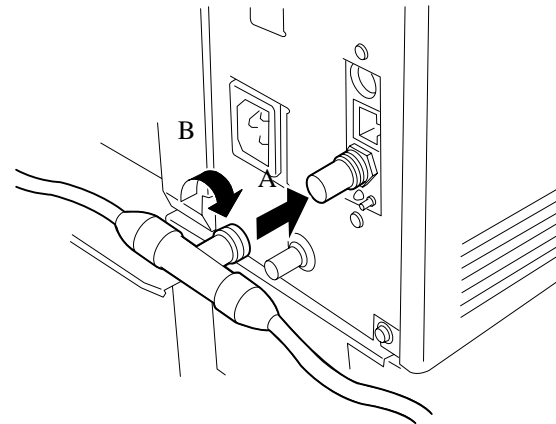
note: If you are connecting to an active Ethernet network, the connection must be made quickly to minimize interruptions to the network.

Connecting Thin Coaxial Cable

Use the BNC T-adaptor to connect the Silentwriter to a network with thin coaxial Ethernet cable. Follow these steps.

1. If you are connecting the Silentwriter into the middle of the network, connect Ethernet cable to both cable connectors of the BNC T-adaptor.
2. If you are connecting to the end of a cable segment, connect Ethernet cable to one cable connector and connect a 50 ohm Ethernet terminator to the other side.
3. Attach the BNC T-adaptor to the bottom connector on the LAN card panel (**A**).
4. Rotate the BNC T-adaptor clockwise to make sure the connector is firmly attached (**B**).

Connecting Thin Coaxial Cable

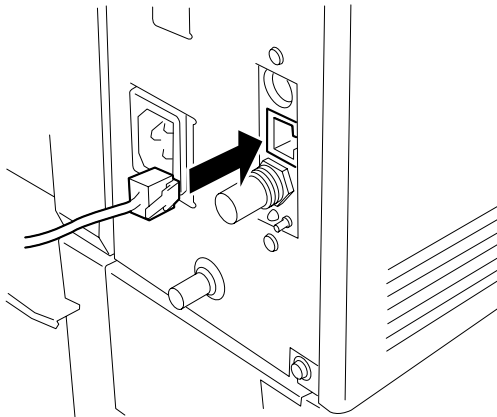


Connecting Twisted Pair Cable

Unshielded twisted pair (UTP) cable connects to the middle connector of the LAN card panel.

1. Connect one end of the twisted pair cable to the middle connector on the LAN card panel.
2. Connect the other end of the twisted pair cable to a UTP wall outlet or other Ethernet source.

Connecting Twisted Pair Cable

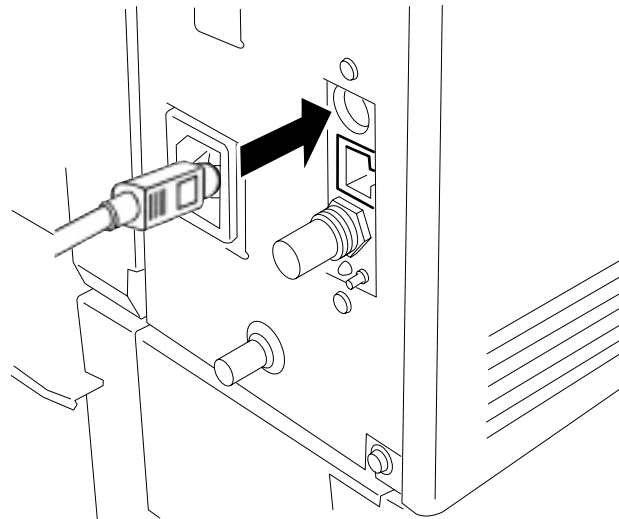


Connecting LocalTalk cable

LocalTalk cable connects to the top connector of the LAN card panel. You can connect LocalTalk cable directly to your Macintosh or to a LocalTalk network. Follow these steps to connect your Silentwriter to a LocalTalk network using RJ-11 cable.

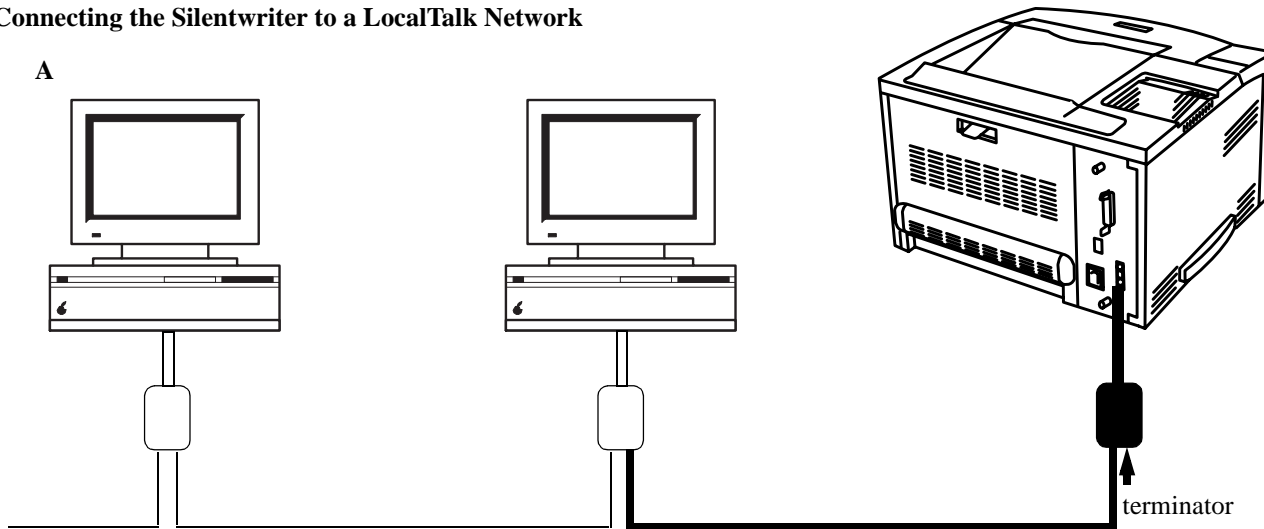
1. Connect LocalTalk cable and converter box to the top connector of the LAN card panel.
2. If the Silentwriter is at the end of a LocalTalk network, connect RJ-11 cable to one RJ-11 connection in the converter box. If necessary, connect a 120-ohm terminator in the other RJ-11 connection in the converter box (**A**).
3. If the Silentwriter is in the middle of a LocalTalk network, move one cable from a workstation to one RJ-11 connection in the converter box. Connect a new RJ-11 cable from the Silentwriter to the workstation (**B**).

Connecting LocalTalk Cable

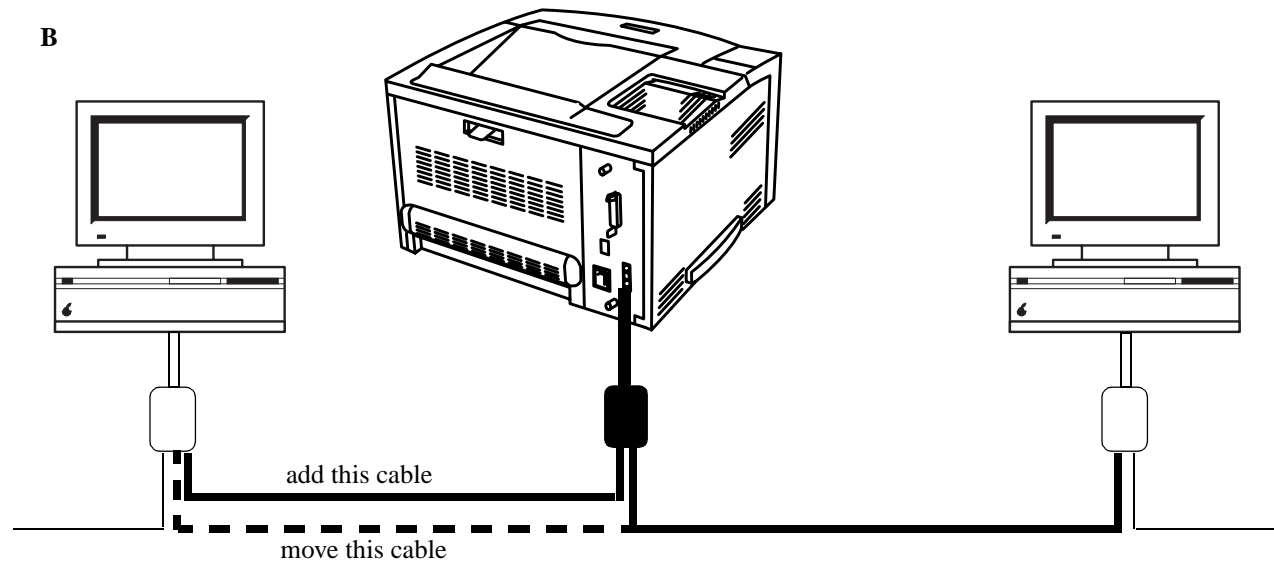


Connecting the Silentwriter to a LocalTalk Network

A



B



Turn On the Printer

Turn on your printer and wait until it displays the **READY** message.

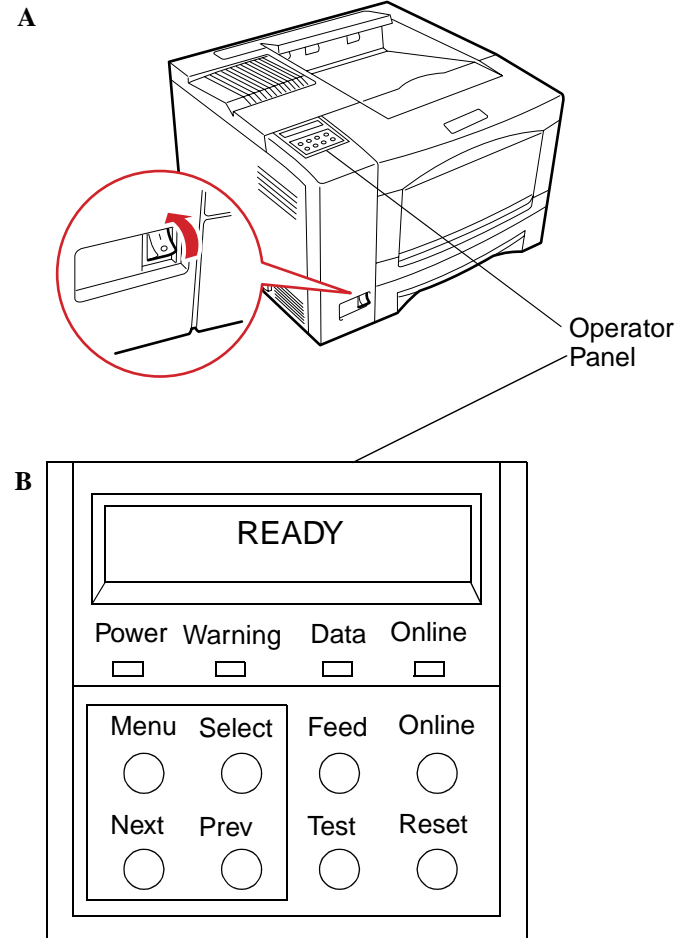
The printer automatically prints a demo page when you turn it on. You use the demo page to verify that the printer is ready to provide quality output. Follow these steps.

1. Turn on the printer power (A).
2. The following messages appear on the operator panel display (B) in sequence.
RESETTING
WARMING UP
PROCESSING DEMO
PRINTING DEMO

3. The printer issues the demo page and the following message appears on the operator panel display.

READY

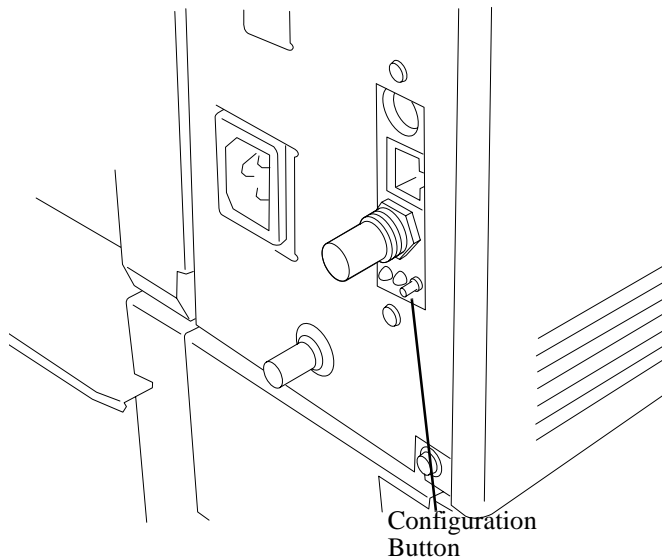
note: For more information about the operator panel display, see the *User's Guide*.



Print a Configuration Page

Press the configuration button to print a configuration page for the LAN card. The configuration page displays information about the printer's parameter settings and any installed boards.

LAN Card Panel



Configuration Page

Firmware version

MAC Address

NetWare
Print Server
Name

NetBEUI
and TCP/IP
Printer Name

AppleTalk
Name and
Zone

IP Address and
Subnet Mask

```
NEC LAN Board Configuration Page
Release : B5.02 NEC Ethernet 1183E (00@3A14)
(C) Copyright 1992-1995 ITC Ltd.

Node Address : 00:A0:92:90:19:15
IPX/SPX (NetWare)
Printer Name : NP_901915
Fileserver Limited :
Remote Printer Mode : Disabled
Remote Printer Number : 0
Ext. Function : Disabled
Total Servers Found : 0
Total Servers Logged : 0
Total Queues Logged : 0
Logged as Rprinter # : --
Fileserver logon time : 5

DLC (Windows NT)
Name : 00:A0:92:90:19:15

NetBEUI
Name : NP_901915
AppleTalk
Name : NP_901915
EtherTalk Zone : San Jose Office
AppleTalk Entities : ITC_Responder

TCP/IP
IP Address : 11.22.33.115
Subnet Mask : 255.0.0.0
Auto IP Set : Disabled
```


INSTALLING NEC 1765 SOFTWARE 3



Overview

This chapter describes how to install NEC 1765 Administration and Client software. It contains the following sections.

- Using Silentwriter Software with the Silentwriter 1765
- NEC 1765 Software
- Installing NEC 1765 Software for NetWare
- Installing NEC 1765 Software for TCP/IP
- Installing NEC 1765 Software for AppleTalk

Using Silentwriter Software with the Silentwriter 1765

This chapter assumes you have already installed the Silentwriter Printing System and drivers as described in Chapter 2, “Using Silentwriter Software,” of the *User’s Guide*.

The Printer Setup software, which allows you to specify which printer options have been installed, communicates with the Silentwriter through the parallel cable. If you connect your Silentwriter to the network using Ethernet cable please make note of the following.

The Windows PCL 5e Driver

This printer driver cannot sense installed options across the Ethernet. All printer options will be enabled whether they are actually installed or not. To avoid unexpected output, make sure you choose output options that are actually installed.

The Windows PostScript Driver

The PostScript driver assumes that all options have been installed. In order to direct output to specified printer options you must configure the PostScript driver manually using the PostScript printer driver as described in Chapter 2 of the *User’s Guide*. Be sure to deselect any option that is not installed.

NEC 1765 Software

NEC 1765 software allows you to configure and administer the Silentwriter 1765 from your workstation or networked computer. There are five versions of the software, described below and summarized in Table 3-1.

- NEC 1765 Administration software for NetWare networks on Windows systems
- NEC 1765 Client software for NetWare networks on Windows systems
- NEC 1765 Administration software for TCP/IP networks on Windows systems
- NEC 1765 Client software for TCP/IP networks on Windows systems
- NEC 1765 software for AppleTalk networks on Mac OS systems

Table 3-1: NEC 1765 Software

		Windows	
		Mac OS	
Administration		■	■
Client			■

For Windows systems, install NEC 1765 Administration software on the machine which you use to administer the network. Install NEC 1765 Client on any computer in the network which will be used to send documents to the Silentwriter.

For Mac OS systems, install NEC 1765 software on any computer in the network which will be used to send documents to the Silentwriter.

note: All users of NEC 1765 software on AppleTalk are able to change printer names and AppleTalk Zones. Ask the system administrator before changing this information to prevent system conflicts.

If you have a NetWare network and use Windows software, turn to the next section to install NEC 1765 Administration software and NEC 1765 Client software for NetWare systems.

If you have a TCP/IP network and use Windows software, proceed to page 3-10 to install NEC 1765 Administration software and NEC 1765 Client software for TCP/IP networks.

If you use Mac OS software, proceed to page 3-16 for information on installing NEC 1765 software for AppleTalk.

Installing NEC 1765 Software for NetWare

Precautions

- Do not run NEC 1765 Administration software and NEC 1765 Client software simultaneously on the same computer.
- If the NEC 1765 software requires additional memory to run, try closing unused software applications to free more memory.
- Only the system administrator should install and use NEC 1765 Administration software. Network users can use NEC 1765 Client software to manage print jobs across the network.
- Install NEC 1765 Client software on each client computer. See “Installing NEC 1765 Client Software for NetWare in Windows 3.1x” and “Installing NEC 1765 Client Software for NetWare in Windows 95” on page 3-8.

To install NEC 1765 software on Windows systems you need

- a computer with an 80386 SX processor operating at 16 mhz or above
- for Windows 3.1x, at least 8 megabytes of RAM and preferably more
- for Windows 95, at least 8 megabytes of RAM and preferably more
- a hard disk with at least 2 megabytes available

note: Both NEC 1765 Administration software and NEC 1765 Client software are easier to use with a mouse. NEC 1765 software also supports hot key combinations. Underlined letters indicate a hot key. Press **Alt** and the underlined letter to use a hot key combination. Press **Tab** to move from field to field. Press the **Up** and **Down** arrows to scroll.

Preparing to Install

This program operates with Windows operating system software. If the operating system has not been installed, follow the instructions in your operating system documentation to install the operating system software on your computer.

NEC 1765 software for NetWare requires the presence of a driver that supports the IPX/SPX network communications protocol. One example is the ODI driver supplied by Novell.

Verifying IPX/SPX Protocol in Windows 3.1x

Follow these steps to verify that the ODI driver has been installed.

1. From Windows, open the MS-DOS icon to move to the command prompt.
2. At the command prompt type
`mem /c`
 A list of system software modules will appear on the screen. If the list scrolls by too quickly, type
`mem /c /p`
 to see the list one screen at a time. If it is installed, the ODI driver appears in the first set of modules in memory. Look for the IPXODI module.
3. At the command prompt type
`exit`
 to return to Windows.

If the ODI driver, or another IPX/SPX-compatible driver, has not been installed, refer to the NetWare manuals for details on setting up NetWare.

Verifying IPX/SPX Protocol in Windows 95

Follow these steps to verify that the ODI driver has been installed.

1. From Windows 95, open the control panels. (Select the **Start** menu, then the **Setting** submenu, then the **Control Panel** menu option.)
2. Open the **Network** control panel.
3. Select the **Configuration** tab in the Network control panel.
4. See if IPX/SPX Compatible Protocol is listed as one of the installed network components. If IPX/SPX has already been installed proceed to step 8.
5. In the Configuration panel click the **Add** button.
6. In the Select Network Component Type dialog box select **Protocol** and click the **Add** button.
7. In the Select Network Protocol dialog box select **Microsoft** from the Manufacturers list, then select **IPX/SPX compatible Protocol** from the Network Protocol list. Click the **OK** button.
8. Click **OK** to leave the Network Configuration panel.

Installing NEC 1765 Administration Software for NetWare in Windows 3.1x

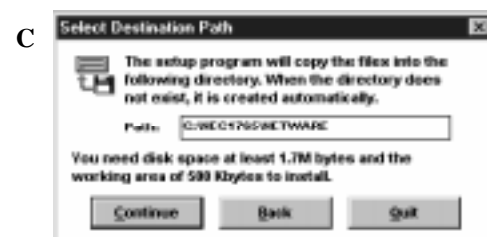
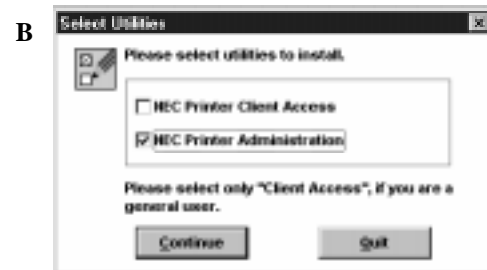
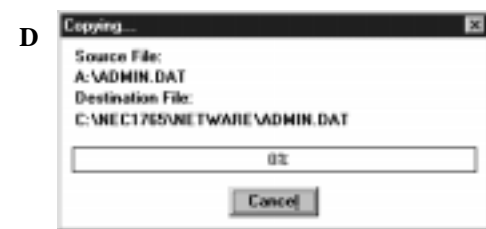
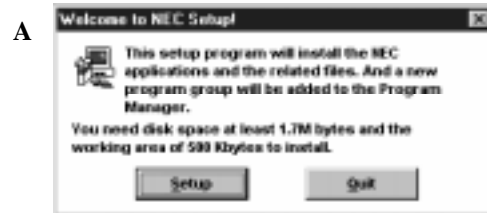
Follow these steps to install NEC 1765 Administration software for NetWare using the installer program provided on the NEC 1765 software for NetWare diskette.

1. Boot your system and start Windows.
2. Insert the NEC 1765 software for NetWare diskette into the floppy drive (this example uses drive a:).
3. In the Windows Program Manager, select **Run** from the File menu. Windows displays the Run dialog box.
4. Type
a:\setup.exe
in the Command Line field.
5. Click the **OK** button. This launches the installer program. The installer starts up, and the Welcome screen opens. Click the **Setup** button (A).
6. In the Select Utilities screen, select **NEC Printer Administration**. Make sure the checkbox in front of NEC Printer Client Access is blank. Click the **Continue** button (B).
7. The Select Destination Path screen defines the directory for the new software. Click **Continue** (C).
8. The Installer begins copying the files (D). The software will be copied into a directory named c:\NEC1765\NETWARE.
9. When the installation is complete, click the **OK** button in the Exit Setup window to close the installer (E).
10. Restart Windows to complete the software installation.
11. Run NEC 1765 Administration software for NetWare by opening the Program Manager. The NEC 1765 Administration software icon is located in the NEC Printer Utility - NetWare program group (F).

Installing NEC 1765 Administration Software for NetWare in Windows 95

Follow these steps to install NEC 1765 Administration software for NetWare using the installer program provided on the NEC 1765 software for NetWare diskette.

1. Boot your system and start Windows.
2. Insert the NEC 1765 software for NetWare diskette into the floppy drive (this example uses drive a:).
3. In Windows, select **Run** from the Start menu. Windows displays the Run dialog box.
4. Make sure
a:\setup.exe
appears in the Command Line field.
5. Click the **OK** button. This launches the installer program. The installer starts up, and the Welcome screen opens. Click the **Setup** button (A).
6. In the Select Utilities screen, select **NEC Printer Administration**. Make sure the checkbox in front of NEC Printer Client Access is blank. Click the **Continue** button (B).
7. The Select Destination Path screen defines the directory for the new software. Click the **Continue** button (C).
8. The Installer begins copying the files (D). The software will be copied into a directory named c:\NEC1765\NETWARE.
9. When the installation is complete, click the **OK** button in the Exit Setup window to close the installer (E).
10. Restart Windows to complete the software installation.
11. Run NEC 1765 Administration software for NetWare by selecting the **Programs** submenu from the Start menu. NEC 1765 Administration software is located in the NEC Printer Utility - NetWare program group (F).



Installing NEC 1765 Client Software for NetWare in Windows 3.1x

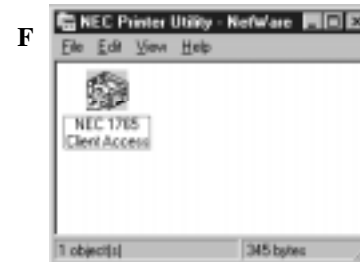
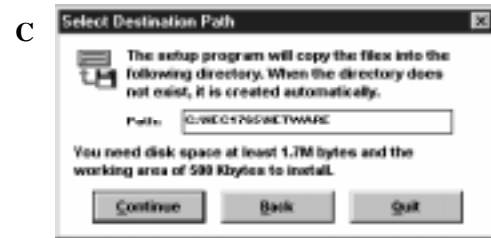
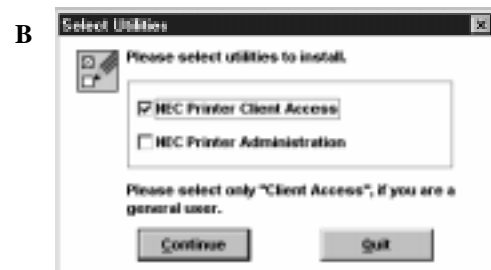
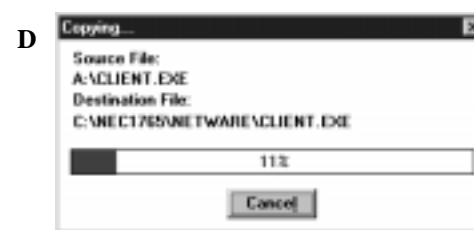
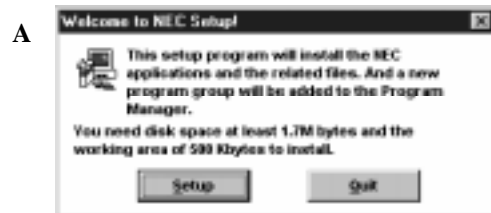
Follow these steps to install NEC 1765 Client software for NetWare using the installer program provided on the NEC 1765 software for NetWare diskette.

1. Boot your system and start Windows.
2. Insert the NEC 1765 software for NetWare diskette into the appropriate drive (this example uses drive a:).
3. In the Windows Program Manager, select **Run** from the File menu. Windows displays the Run dialog box.
4. Type
a:\setup.exe
in the Command Line field.
5. Click the **OK** button. This launches the installer program. The installer starts up, and the Welcome screen opens. Click the **Setup** button (A).
6. In the Select Utilities screen, select **NEC Printer Client Access**. Make sure the checkbox in front of NEC Printer Administration is blank. Click the **Continue** button (B).
7. The Select Destination Path screen defines the directory for the new software. Click the **Continue** button (C).
8. The Installer begins copying the files (D). The software will be copied into a directory named c:\NEC1765\NETWARE.
9. When the installation is complete, click the **OK** button in the Exit Setup window to close the installer (E).
10. Restart Windows to complete the software installation.
11. Run NEC 1765 Client software for NetWare by opening the Program Manager. The NEC 1765 Client software icon is located in the NEC Printer Utility - NetWare program group (F).

Installing NEC 1765 Client Software for NetWare in Windows 95

Follow these steps to install NEC 1765 Client software for NetWare using the installer program provided on the NEC 1765 software for NetWare diskette.

1. Boot your system and start Windows.
2. Insert the NEC 1765 software for NetWare diskette into the appropriate drive (this example uses drive a:).
3. In Windows, select **Run** from the Start menu. Windows displays the Run dialog box.
4. Make sure
a:\setup.exe
appears in the Command Line field.
5. Click the **OK** button. This launches the installer program. The installer starts up, and the Welcome screen opens. Click the **Setup** button (A).
6. In the Select Utilities screen, select **NEC Printer Client Access**. Make sure the checkbox in front of NEC Printer Administration is blank. Click the **Continue** button (B).
7. The Select Destination Path screen defines the directory for the new software. Click the **Continue** button (C).
8. The Installer begins copying the files (D). The software will be copied into a directory named c:\NEC1765\NETWARE.
9. When the installation is complete, click the **OK** button in the Exit Setup window to close the installer (E).
10. Restart Windows to complete the software installation.
11. Run NEC 1765 Client software for NetWare by selecting the **Programs** submenu from the Start menu. The NEC 1765 Client software icon is located in the NEC Printer Utility - NetWare program group (F).



Installing NEC 1765 Software for TCP/IP

Precautions

- Sometimes NEC 1765 software requires additional memory to run. You can free more memory by closing unused software applications.
- Only the system administrator should install and use NEC 1765 Administration software. Network users can use NEC 1765 Client software to manage print jobs across the network.
- Install NEC 1765 Client software on each client computer.

To install NEC 1765 software on Windows systems you need

- a computer with an 80386 SX processor operating at 16 mhz or above
- for Windows 3.1x, at least 8 megabytes of RAM and preferably more
- for Windows 95, at least 8 megabytes of RAM and preferably more
- a hard disk with at least 2 megabytes available

note: Both NEC 1765 Administration software and NEC 1765 Client software are easier to use with a mouse. NEC 1765 software also supports hot key combinations. Underlined letters indicate a hot key. Press **Alt** and the underlined letter to use a hot key combination. Press **Tab** to move from field to field. Press the **Up** and **Down** arrows to scroll.

Preparing to Install

This program depends on Windows operating system software. If that operating system has not been installed, follow the instructions in your operating system documentation to install the operating system software on your computer.

Verifying TCP/IP Protocol in Windows 3.1x

If you are using Windows 3.1x, you will need to install a TCP/IP stack and Windows sockets. This software is available from several third party vendors. Check with your system administrator for more details.

Verifying TCP/IP Protocol in Windows for Workgroups

If you use Windows for Workgroups, follow these steps to confirm that a TCP/IP driver has been installed.

1. From Windows open the Network Setup icon.
2. Look for the TCP/IP driver in the list of Network Drivers.

Verifying TCP/IP Protocol in Windows 95

Follow these steps to verify that the TCP/IP protocol has been installed on your Windows 95 system.

1. From Windows 95 open the control panels. (Select the **Start** menu, then the **Settings** submenu, then the **Control Panel** menu option.)
2. Open the **Network** control panel.
3. Select the **Configuration** tab in the Network control panel.
4. See if TCP/IP is listed as one of the installed network components. If TCP/IP has already been installed proceed to step 8.
5. In the Configuration panel click the **Add** button.
6. In the Select Network Component Type dialog box select **Protocol** and click the **Add** button.
7. In the Select Network Protocol dialog box select **Microsoft** from the Manufacturers list, then select **TCP/IP** from the Network Protocols list. Click the **OK** button.
8. In the Configuration panel of the Network control panel, select **TCP/IP** from the Network Components list. Click the **Properties** button.
9. If your network supports ARP, click **Obtain an IP address automatically** in the TCP/IP Properties dialog box. If your network does not support ARP click **Specify an IP address** and enter the IP address and subnet mask.
10. Click the **OK** button to close the TCP/IP Properties dialog box.
11. The System Settings Change dialog box asks if you want to restart your computer. You must restart for the changes to take effect. Click the **Yes** button to restart.

Installing NEC 1765 Administration Software for TCP/IP in Windows 3.1x

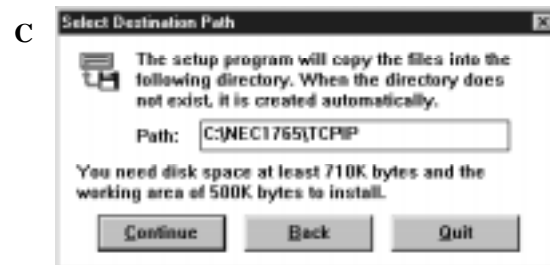
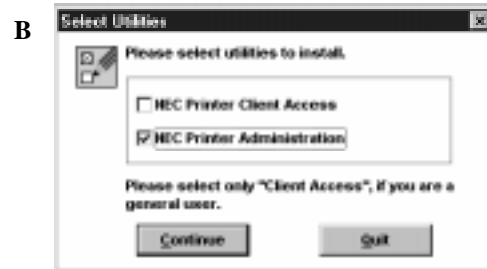
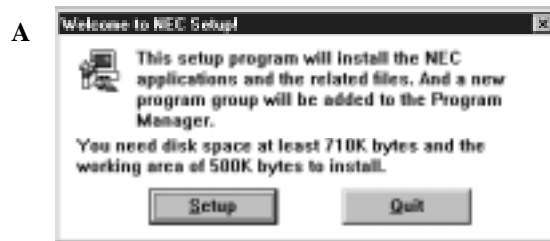
Follow these steps to install NEC 1765 Administration software for TCP/IP using the installer program provided on the NEC 1765 software for NetWare diskette.

1. Boot your system and start Windows.
2. Insert the NEC 1765 software for TCP/IP diskette into the floppy drive (this example uses drive a:).
3. In the Windows Program Manager, select **Run** from the File menu. Windows displays the Run dialog box.
4. Type
a:\setup.exe
in the Command Line field.
5. Click the **OK** button. This launches the installer program. The installer starts up, and the Welcome screen opens. Click the **Setup** button (A).
6. In the Select Utilities screen, select **NEC Printer Administration**. Make sure the checkbox in front of NEC Printer Client Access is blank. Click the **Continue** button (B).
7. The Select Destination Path screen defines the directory for the new software. Click **Continue** (C).
8. The Installer begins copying the files (D). The software will be copied into a directory named c:\NEC1765\TCP/IP.
9. When the installation is complete, click the **OK** button in the Exit Setup window to close the installer (E).
10. Restart Windows to complete the software installation.
11. Run NEC 1765 Administration software for TCP/IP by opening the Program Manager. The NEC 1765 Administration software icon is located in the NEC Printer Utility - TCP/IP program group (F).

Installing NEC 1765 Administration Software for TCP/IP in Windows 95

Follow these steps to install NEC 1765 Administration software for TCP/IP using the installer program provided on the NEC 1765 software for NetWare diskette.

1. Boot your system and start Windows.
2. Insert the NEC 1765 software for TCP/IP diskette into the floppy drive (this example uses drive a:).
3. In Windows, select **Run** from the Start menu. Windows displays the Run dialog box.
4. Make sure
a:\setup.exe
appears in the Command Line field.
5. Click the **OK** button. This launches the installer program. The installer starts up, and the Welcome screen opens. Click the **Setup** button (A).
6. In the Select Utilities screen, select **NEC Printer Administration**. Make sure the checkbox in front of NEC Printer Client Access is blank. Click the **Continue** button (B).
7. The Select Destination Path screen defines the directory for the new software. Click the **Continue** button (C).
8. The Installer begins copying the files (D). The software will be copied into a directory named c:\NEC1765\TCP/IP.
9. When the installation is complete, click the **OK** button in the Exit Setup window to close the installer (E).
10. Restart Windows to complete the software installation.
11. Run NEC 1765 Administration software for TCP/IP by opening the **Programs** submenu from the Start menu. NEC 1765 Administration software is located in the NEC Printer Utility - TCP/IP program group (F).



Installing NEC 1765 Client Software for TCP/IP in Windows 3.1x

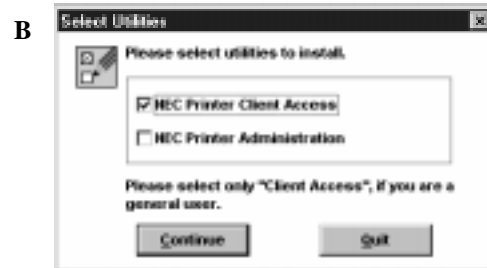
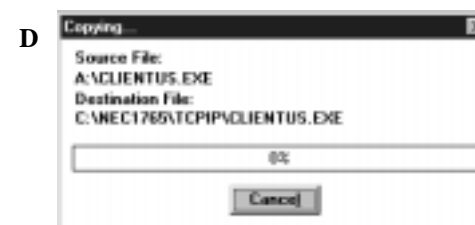
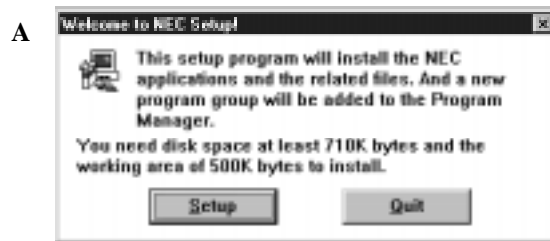
Follow these steps to install NEC 1765 Client software for TCP/IP using the installer program provided on the NEC 1765 software for NetWare diskette.

1. Boot your system and start Windows.
2. Insert the NEC 1765 software for TCP/IP diskette into the floppy drive (this example uses drive a:).
3. In the Windows Program Manager, select **Run** from the File menu. Windows displays the Run dialog box.
4. Type
a:\setup.exe
in the Command Line field.
5. Click the **OK** button. This launches the installer program. The installer starts up, and the Welcome screen opens. Click the **Setup** button (A).
6. In the Select Utilities screen, select **NEC Printer Client Access**. Make sure the checkbox in front of NEC Printer Administration is blank. Click the **Continue** button (B).
7. The Select Destination Path screen defines the directory for the new software. Click **Continue** (C).
8. The Installer begins copying the files (D). The software will be copied into a directory named c:\NEC1765\TCP/IP.
9. When the installation is complete, click the **OK** button in the Exit Setup window to close the installer (E).
10. Restart Windows to complete the software installation.
11. Run NEC 1765 Client software for TCP/IP by opening the Program Manager. The NEC 1765 Client software icon is located in the NEC Printer Utility - TCP/IP program group (F).

Installing NEC 1765 Client Software for TCP/IP in Windows 95

Follow these steps to install NEC 1765 Client software for TCP/IP using the installer program provided on the NEC 1765 software for NetWare diskette.

1. Boot your system and start Windows.
2. Insert the NEC 1765 software for TCP/IP diskette into the floppy drive (this example uses drive a:).
3. In Windows, select **Run** from the Start menu. Windows displays the Run dialog box.
4. Make sure
a:\setup.exe
appears in the Command Line field.
5. Click the **OK** button. This launches the installer program. The installer starts up, and the Welcome screen opens. Click the **Setup** button (A).
6. In the Select Utilities screen, select **NEC Printer Client Access**. Make sure the checkbox in front of NEC Printer Administration is blank. Click the **Continue** button (B).
7. The Select Destination Path screen defines the directory for the new software. Click the **Continue** button (C).
8. The Installer begins copying the files (D). The software will be copied into a directory named c:\NEC1765\TCP/IP.
9. When the installation is complete, click the **OK** button in the Exit Setup window to close the installer (E).
10. Restart Windows to complete the software installation.
11. Run NEC 1765 Client software for TCP/IP by opening the **Programs** submenu from the Start menu. NEC 1765 Client software is located in the NEC Printer Utility - TCP/IP program group (F).



Installing NEC 1765 Software for AppleTalk Systems

Preparing to Install

Before installing the software, make sure that the printer and the computer have been connected to the EtherTalk or LocalTalk network correctly.

Follow these steps to confirm that the Macintosh has been correctly connected to the EtherTalk or LocalTalk network.

1. Select the Control Panel menu option from the Apple menu, then open the Network control panel.
2. If you are using EtherTalk, make sure the EtherTalk icon is selected. If you are using LocalTalk, make sure the LocalTalk icon is available and select it.
3. Click in the box in the upper left corner of the window to close the Network control panel.

Then, follow these steps to confirm that the Silentwriter has been correctly connected to the EtherTalk or LocalTalk network.

1. Select the Chooser menu option from the Apple menu.
2. If your network has multiple zones, select the appropriate zone from the list of zones in the lower left part of the window. The factory default zone is “*”.
3. Select the LaserWriter 8 icon in the upper left corner.
4. The Silentwriter should appear in the list of printers in the upper right corner. The factory default name is “NP_” followed by 6 digits.
5. Click in the box in the upper left corner of the window to close the Chooser.

Installing NEC 1765 Software for AppleTalk

Follow these steps to install NEC 1765 for AppleTalk software.

1. Insert the NEC 1765 software for AppleTalk diskette into the floppy disk drive.
2. Double click on the Installer to open it.
3. The Installer installs the following software
 - NEC 1700 Silentwriter PostScript Printer Description (PPD) file in the Printer Descriptions folder in the Extensions folder in the System folder
 - NEC 1765 software for AppleTalk in the NEC 1700 Utilities folder
 - Apple Printer Utility in the NEC 1700 Utilities folder

Proceed to “AppleTalk” on page 4-32 for information on configuring your Silentwriter and Mac OS for printing.

CONFIGURING YOUR NETWORK PRINTER 4



Overview

This chapter provides information about adding the Silentwriter to your network and configuring your network and Silentwriter to work together. Each section in this chapter corresponds to a particular type of network and operating system. Following is a list of the sections in this chapter.

- Description of Configuration Process
- NetWare with PCONSOLE
- NetWare with NetWare Administrator
- Windows 95 Using TCP/IP Protocol
- Windows NT Using TCP/IP Protocol
- UNIX Using TCP/IP Protocol
- Windows NT Using DLC Protocol
- AppleTalk
- LAN Manager v2.2
- OS/2 Warp Server or LAN Server v4.0

The final section briefly describes using SNMP to view information about the Silentwriter across a network.

Description of Configuration Process

Although the protocols and requirements of each network and operating system differ, generally each section tells you how to

Verify installation of printer and NEC 1765 software:
Each network uses a different combination of printer and NEC 1765 software. Before configuring your Silentwriter, make sure you've installed all necessary software.

Create a unique name or address for the printer: Each printer on the network must have a unique identifier or name. NetWare and AppleTalk networks use a printer name. TCP/IP networks rely on an IP address for unique identification. DLC networks use the MAC address. The configuration page includes this information. An example configuration page is shown on page 2-13.

Establish the printer on the network and define a print queue: The queue manages documents arriving from different sources to ensure that documents from all users are printed efficiently.

To configure your Silentwriter and network with NetWare network operating system (NOS) and PCONSOLE, turn to the next section.

To configure your Silentwriter and network with NetWare NOS and NetWare Administrator (NetWare 4.1 only), turn to page 4-13.

To configure your Silentwriter and network using the TCP/IP networking capabilities of Windows 95 turn to page 4-20.

To configure your Silentwriter and network using the TCP/IP networking capabilities of Windows NT turn to page 4-25.

To configure your Silentwriter and network using the TCP/IP networking capabilities of UNIX turn to page 4-27.

To configure your Silentwriter and network with Windows NT using DLC, turn to page 4-30.

To configure your Silentwriter and network with AppleTalk, turn to page 4-32.

To configure your Silentwriter and network with LAN Manager, turn to page 4-34.

To configure your Silentwriter and network with LAN Server, turn to page 4-36.

NetWare with PCONSOLE

This section describes how to add your Silentwriter to the network using NetWare NOS and PCONSOLE. You may choose either Network Printer or Remote Printer mode.

The following steps summarize how to connect your Silentwriter in either Network Printer or Remote Printer mode.

1. Select the operating mode (Network or Remote).
2. Install NetWare Client software on the workstation.
3. Identify the printer.
4. Establish the printer on the network.
5. Enable the print server (for Remote Printer mode only).

These steps are described in detail below.

Select the Operating Mode

Before you add the Silentwriter to your network, you must choose a network operating mode for your Silentwriter. The Silentwriter can be used in three different modes—local, network, and remote. The 1765 Administration software for NetWare allows you to choose between Network Printer or Remote Printer network modes. Remote printers can be connected with ethernet cables or via the parallel port. Each mode is described in more detail in this section.

Local Printers

Local printers connect directly to a single computer workstation with a bidirectional parallel cable. Local printers can be shared on peer-to-peer networks but are not part of the NetWare client/server network. For more information on using your Silentwriter as a Local Printer see the *User's Guide*.

Network Printers

Network printers connect directly to a network. The network printer's LAN card acts as a print server for the printer. Users can monitor their output with NEC 1765 software and take advantage of high-speed Ethernet connections.

Remote Printers

Remote printers connect to a file server or single workstation. Documents travel over the network to a file server and then to a print server which sends the file to the Silentwriter 1765 for printing.

In Remote Printer Mode the Silentwriter often uses a parallel cable to connect to the file server or workstation. Other remote printer configurations use Ethernet connections but the print server for the printer resides on a workstation or a file server.

Remote Printers Connected by Ethernet: In remote printer mode the print server resides on a workstation or a file server.

If the print server resides on a workstation, the workstation handles the entire printing process, reducing the workload on the file server.

If the print server resides on a file server, the print server is not considered an additional NetWare connection. This is important for networks which are close to their user license limits.

Remote Printers Connected by Parallel Cable: If you use a parallel cable to connect your Silentwriter in Remote Printer mode, you will not be able to use the NEC 1765 software to monitor the printer or the progress of your print jobs except on the workstation connected directly to your printer. In addition, parallel cable connections are much slower than Ethernet connections. For these reasons, you will most likely want to use Ethernet connections. However, if you use NetWare NOS and use the Silentwriter to replace a printer that is currently connected to a remote file server or single workstation, you can avoid reconfiguring your network by connecting the Silentwriter in Remote Printer mode. In addition, connecting your Silentwriter to a workstation with a parallel cable does not use a network connection, leaving more

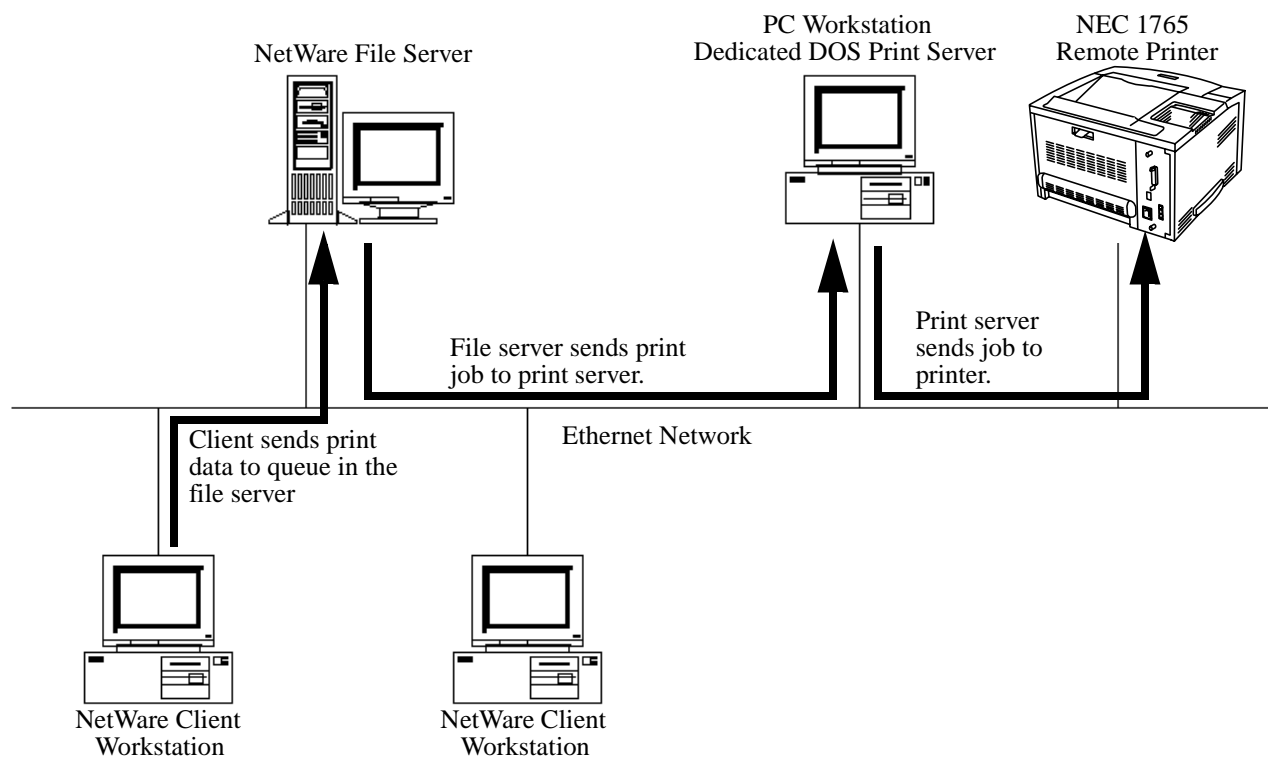
network connections available for workstations or servers.

If you choose Remote Printer mode, consider the following.

- In Remote Printer mode, NetWare software moves files from the file server to its print server and from there to the remote printer.
- The remote print server can be either a NetWare Loadable Module (NLM) print server or a dedicated DOS print server.
 - An NLM print server resides on a remote file server, uses PSERVER.NLM, and is used in both NetWare 3.1x and 4.1.
 - A dedicated DOS print server resides on a single workstation, uses PSERVER.EXE, and is used in NetWare 3.1x only.
 - Dedicated print servers have significantly better performance.
- Using your Silentwriter as an NLM print server might result in much slower printing speed.
- If you are using your Silentwriter as a dedicated DOS print server with a parallel cable connection, you will be able to monitor the printer with NEC 1765 software only from the workstation that is locally connected to the printer.

The figure on the next page shows a Silentwriter in Remote Printer Mode connected to a network with a dedicated DOS print server. The figure shows the Silentwriter connected to the Ethernet. To use a parallel cable connection, connect the Silentwriter directly to the print server.

Silentwriter in Remote Printer Mode



Install NetWare Client Software at the Workstation

From the workstation, load the version of NetWare Client software appropriate for your NOS (version 3.11, 3.12 or 4.1). You will also need to load the following four drivers, provided by NetWare.

- LSL.COM
- NE2000.COM or the appropriate network card driver
- IPXODI.COM (IPX.COM for older NetWare versions)
- VLM.EXE (NETX.COM for older NetWare versions)

These drivers usually load automatically; make sure that they are included in or called from your AUTOEXEC.BAT file. Follow these steps to check your AUTOEXEC.BAT file.

1. At the MS-DOS prompt type
`edit c:\autoexec.bat`
2. Look for the lines
`LSL.COM`
`NE2000.COM`
`IPXODI.COM`
`VLM.EXE`
Or
`call c:\nwclient\startnet.bat`
3. Quit edit.

Identify the Printer

Use the NEC 1765 Administration software for NetWare to set the printer name and define the operating mode.

1. From Windows, run NEC 1765 Administration software for NetWare.
2. Select the printer you want to change from the list of printers in the Printer Administration window (A).

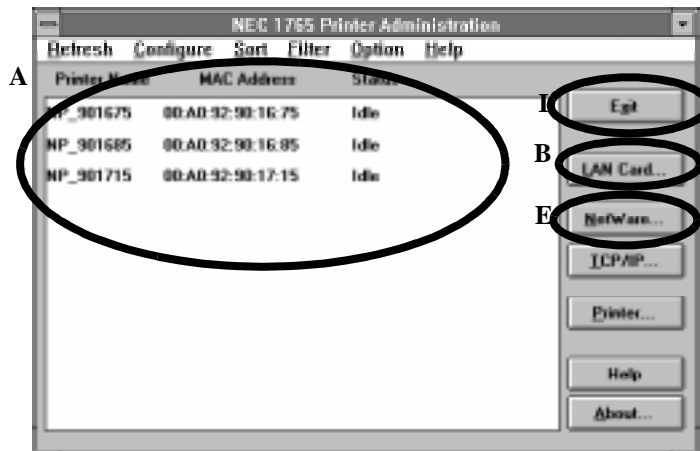
Set the Printer Name

3. From the Printer Administration window click the **LAN Card** button or select the **LAN Card** menu option from the Configure menu (B).
4. The LAN card Parameters dialog box displays the default and current printer names.
5. Type the new name in the **Printer Name** text box (C).
6. Select the **Save** button to save the new name and leave the LAN card Parameters dialog box (D).

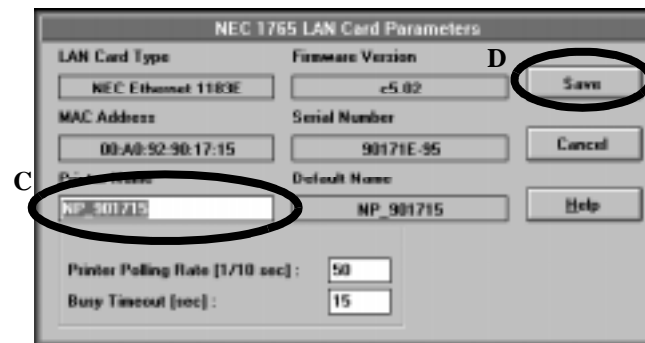
Set the Printer Operating Mode

7. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu (E).
8. The NetWare Configuration dialog box displays the current operating mode.
9. Select the button of the mode you are planning to use (F).
10. Make sure the print server name matches the name you defined in Step 5 (G).
11. Select the **Save** button to save the new operating mode and leave the NetWare Configuration dialog box (H).
12. Select the **Exit** button from the Printer Administration window to close NEC 1765 Administration software for NetWare (I).

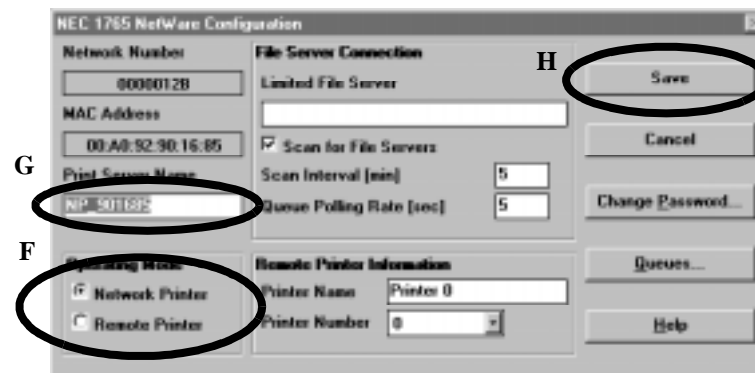
Printer Administration Window



Set the Printer Name



Set the Printer Operating Mode



Establish the Printer on the NetWare Network

This section describes how to define a print queue, define a print server, configure the print server, and configure the print queue.

Define the Print Queue

1. From the workstation, login to the NetWare File Server as a supervisor.
2. Run PCONSOLE at the DOS prompt.
3. If you are using NetWare 4.1, press **F4** to switch to Bindery Context Mode before creating a print queue or server.
4. Select **Print Queue Information** from the Available Options menu.
5. Use the arrow keys to select a print queue or press the Insert key and type a print queue name in the **New Print Queue Name** text box. Press **Enter**. Managing your network will be easier if you select a queue name that is related to the printer name. For example, if the printer name is NP_015446, you could enter NP_015446_Q for the queue name.
6. Press the **Esc** key to return to the Available Options menu.

Define the Print Server

7. Select **Print Server Information** from the Available Options menu to move to the Print Servers menu.
8. Press the **Insert** key and enter the new print server name in the **New Print Server Name** text box. You should use the printer name you defined earlier. For this example, the print server name is NP_015446. Press **Enter**.
9. From the Print Servers list, select the new print server and press **Enter** to move to the Print Server Information menu.
10. You may enter a description of the new printer by selecting **Full Name** from the Print Server Information menu and entering a text description.

Define the Password

note: Defining a password, described in step 11, is optional. If you define a password for the LAN card, make sure the password for the LAN card matches the password defined in PCONSOLE before printing to the Silentwriter. See “Set the LAN Card Password” on page 4-10.

If you do not wish to define a password, skip to “Configure the Print Server” on page 4-9.

11. Select **Change Password** from the Print Server Information menu and enter the new password for the printer.

Configure the Print Server

12. In the Print Server Information menu select **Print Server Configuration** to move to the Print Servers Configuration menu.
13. In the Print Servers Configuration menu select **Printer Configuration** to move to the Configured Printers menu.
14. Select the first available **Not Installed Printer** and press **Enter** to move to the specific Printer Configuration menu. The Printer Configuration menu name will depend on the number of the Not Installed Printer you selected. For example, if the first available Not Installed Printer was Printer 0, you will move to Printer 0 Configuration menu.
15. Backspace over the old name and enter a printer name in the **Printer Name** text box. Users will see this name on their list of available printers. The name may be the same as the print server name defined above, or it may be a name that users will recognize more easily, for example, NEC Printer 0.
16. Move to Type and press **Enter**.
17. The printer type depends on the operating mode you have chosen.
For Ethernet connections
 - If you selected Network Printer mode, select **Defined Elsewhere** from the Printer Types menu and press **Enter**.
 - If you selected Remote Printer mode, select **Remote Other/Unknown** from the Printer Types menu and press **Enter**.
 For parallel printer connections, you may only select remote printer mode.
 - Select Parallel, LPT<*port*> if your printer is connected to a server running PSERVER.NLM.
 - Select Remote Parallel, LPT<*port*> if your printer is connected to a DOS workstation running PSERVER.EXE.

- Select Remote Parallel, LPT<*port*> if your printer is connected to a DOS workstation different from the one that is running PSERVER.EXE. In this case, the connected DOS workstation runs RPRINTER.EXE for NetWare 3.1x, or NPRINTER.EXE for NetWare 4.1.

See your NetWare manual for more information about parallel printer connections.

18. Press **Esc** twice to return to the Print Server Configuration menu. Be sure to select **Yes** when PCONSOLE asks you to save changes.

Configure the Print Queue

19. Select **Queues Serviced by Printer** from the Print Server Configuration menu to move to the Defined Printers menu.
20. Select the newly defined printer (NP_015446 in this example) and press **Insert** to move to the File Server Queue menu.
21. Press **Insert** to move to the Available Queues menu.
22. Select the queue you have just created (e.g., NP_015446_Q), press **Enter**, and set the priority. Lower priority numbers have higher printing priority. Usually you will set the priority to 1.
23. Use the **Esc** key several times to leave the PCONSOLE utility.

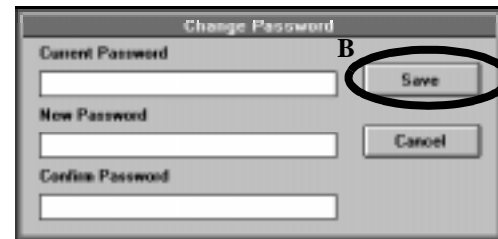
Set the LAN Card Password

note: If you defined a password as described in step 11 on page 4-8 you need to follow steps 24 to 32 below to define a password for the LAN card. Otherwise, turn to “Enable the Remote Printer” on page 4-11. If you define a password for the LAN card, make sure the password for the LAN card matches the password defined in PCONSOLE before printing to the Silentwriter.

24. Open the NEC 1765 Administration software for NetWare.
25. Select the printer from the printer list in the Printer Administration window.

26. Click the **NetWare** button in the Printer Administration window.
27. Click the **Change Password** button in the NetWare Configuration dialog box (A).
28. Type the new password in the **New Password** text box in the Change Password dialog box.
29. Retype the new password in the **Confirm Password** text box in the Change Password dialog box.
30. Click the **Save** button from the Change Password window to close the dialog box (B).
31. Click the **Save** button from the NetWare Configuration window to close the dialog box (C).
32. Click the **Exit** button from the Printer Administration window.

Set the LAN Card Password



Enable the Remote Printer

If you selected Remote Printer mode, you must also enable the Remote Printer server in order to print documents. The steps to enable the Remote Printer server depend on where the print server resides. For printers connected in Network Printer mode, the LAN card is the print server.

Enable the Remote Printer if the Print Server Resides on a File Server (NLM Print Server)

At the NetWare File Server Console, type the command
`load PSERVER <print server>`
 where *<print server>* is the print server you defined in step 8 on page 4-8. In this example, the defined print server is NP_015446 and the command is
`load PSERVER NP_015446`

Enable the Remote Printer if the Print Server Resides on a Workstation (Dedicated DOS Print Server)

1. At the workstation login to the file server as a supervisor.
2. Type the following commands.
`cd f:\public`
`f:\public\pserver.exe <print server>`
 where *<print server>* is the print server you defined in step 8 on page 4-8. In this example, the defined print server is NP_015446 and the commands are
`cd f:\public`
`f:\public\pserver.exe NP_015446`

Enable the Remote Printer if it is Connected to a Workstation With a Parallel Cable

1. From the print server workstation, switch to MS-DOS and run RPRINTER for NetWare 3.1x or NPRINTER for NetWare 4.1.
2. Select the name of the print server you defined in step 8 on page 4-8. In this example, the defined print server is NP_015446.

NetWare with NetWare Administrator

This section describes how to add your Silentwriter to the network using NetWare NOS version 4.1 and NetWare Administrator. You may choose either Network Printer or Remote Printer mode.

The following steps summarize how to connect your Silentwriter in either Network Printer or Remote Printer mode.

1. Select the operating mode (Network or Remote).
2. Install NetWare Client software on the workstation.
3. Identify the printer.
4. Establish the printer on the network.
5. Enable the print server (for Remote Printer mode only).

These steps are described in detail below.

Select the Operating Mode

Before you add the Silentwriter to your network, you must choose a network operating mode for your Silentwriter. The Silentwriter can be used in three different modes—local, network, and remote. The 1765 Administration software for NetWare allows you to choose between Network Printer or Remote Printer network modes. Remote printers can be connected with ethernet cables or via the parallel port. Each mode is described in more detail in this section.

Local Printers

Local printers connect directly to a single computer workstation with a bidirectional parallel cable. Local printers can be shared on peer-to-peer networks but are not part of the NetWare client/server network. For more information on using your Silentwriter as a Local Printer see the *User's Guide*.

Network Printers

Network printers connect directly to a network. The network printer's LAN card acts as a print server for the printer. Users can monitor their output with NEC 1765 software and take advantage of high-speed Ethernet connections.

Remote Printers

Remote printers connect to a file server or single workstation. Documents travel over the network to a file server and then to a print server which sends the file to the Silentwriter 1765 for printing.

In Remote Printer Mode the Silentwriter often uses a parallel cable to connect to the file server or workstation. Other remote printer configurations use Ethernet connections but the print server for the printer resides on a workstation or a file server.

Remote Printers Connected by Ethernet: In remote printer mode the print server resides on a workstation or a file server.

If the print server resides on a workstation, the workstation handles the entire printing process, reducing the workload on the file server.

If the print server resides on a file server, the print server is not considered an additional NetWare connection. This is important for networks which are close to their user license limits.

Remote Printers Connected by Parallel Cable: If you use a parallel cable to connect your Silentwriter in Remote Printer mode, you will not be able to use the NEC 1765 software to monitor the printer or the progress of your print jobs except on the workstation connected directly to your printer. In addition, parallel cable connections are much slower than Ethernet connections. For these reasons, you will most likely want to use Ethernet connections. However, if you use NetWare NOS and use the Silentwriter to replace a printer that is currently connected to a remote file server or single workstation, you can avoid reconfiguring your network by connecting the Silentwriter in Remote Printer mode. In addition, connecting your Silentwriter to a workstation with a parallel cable does not use a network connection, leaving more

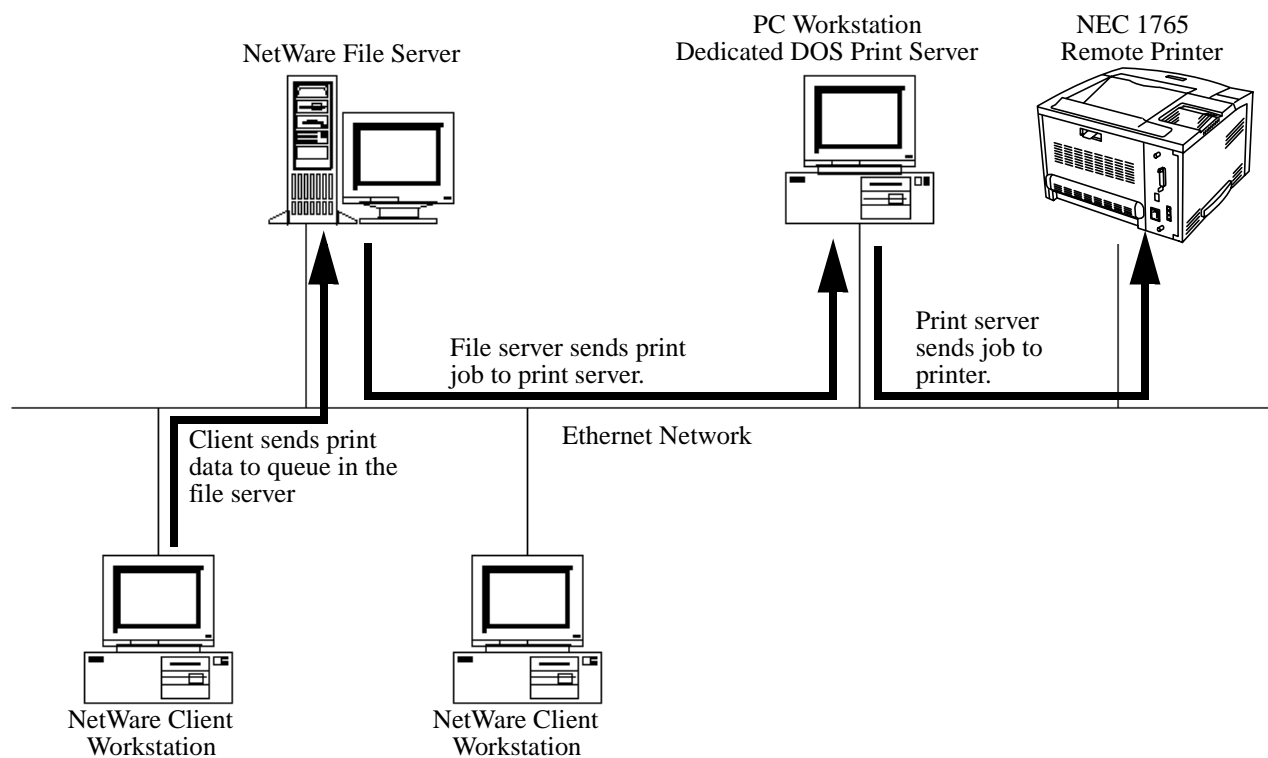
network connections available for workstations or servers.

If you choose Remote Printer mode, consider the following.

- In Remote Printer mode, NetWare software moves files from the file server to its print server and from there to the remote printer.
- The remote print server can be either a NetWare Loadable Module (NLM) print server or a dedicated DOS print server.
 - An NLM print server resides on a remote file server, uses PSERVER.NLM, and is used in both NetWare 3.1x and 4.1.
 - A dedicated DOS print server resides on a single workstation, uses PSERVER.EXE, and is used in NetWare 3.1x only.
 - Dedicated print servers have significantly better performance.
- Using your Silentwriter as an NLM print server might result in much slower printing speed.
- If you are using your Silentwriter as a dedicated DOS print server with a parallel cable connection, you will be able to monitor the printer with NEC 1765 software only from the workstation that is locally connected to the printer.

The figure on the next page shows a Silentwriter in Remote Printer Mode connected to a network with a dedicated DOS print server. The figure shows the Silentwriter connected to the Ethernet. To use a parallel cable connection, connect the Silentwriter directly to the print server.

Silentwriter in Remote Printer Mode



Install NetWare Client Software at the Workstation

From the workstation, load the version of NetWare Client software appropriate for your NOS (version 3.11, 3.12 or 4.1). You will also need to load the following four drivers, provided by NetWare.

- LSL.COM
- NE2000.COM or the appropriate network card driver
- IPXODI.COM (IPX.COM for older NetWare versions)
- VLM.EXE (NETX.COM for older NetWare versions)

These drivers usually load automatically; make sure that they are included in or called from your AUTOEXEC.BAT file. Follow these steps to check your AUTOEXEC.BAT file.

1. At the MS-DOS prompt type
`edit c:\autoexec.bat`
2. Look for the lines
`LSL.COM`
`NE2000.COM`
`IPXODI.COM`
`VLM.EXE`
Or
`call c:\nwclient\startnet.bat`
3. Quit edit.

Identify the Printer

Use the NEC 1765 Administration software for NetWare to set the printer name and define the operating mode.

1. From Windows, run NEC 1765 Administration software for NetWare.
2. Select the printer you want to change from the list of printers in the Printer Administration window (A).

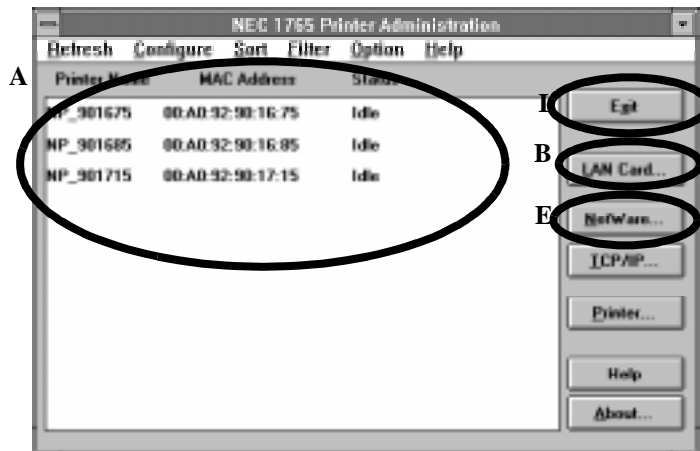
Set the Printer Name

3. From the Printer Administration window click the **LAN Card** button or select the **LAN Card** menu option from the Configure menu (B).
4. The LAN card Parameters dialog box displays the default and current printer names.
5. Type the new name in the **Printer Name** text box (C).
6. Select the **Save** button to save the new name and leave the LAN card Parameters dialog box (D).

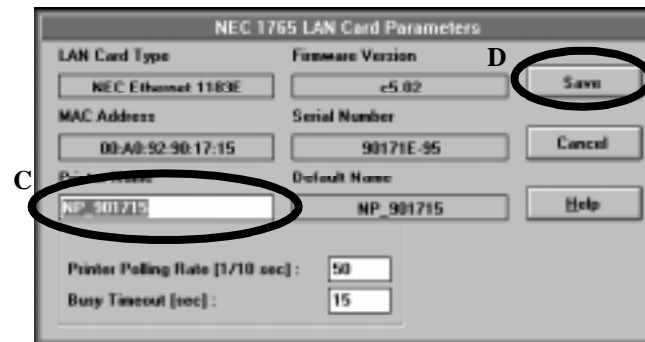
Set the Printer Operating Mode

7. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu (E).
8. The NetWare Configuration dialog box displays the current operating mode.
9. Select the button of the mode you are planning to use (F).
10. Make sure the print server name matches the name you defined in Step 5 (G).
11. Select the **Save** button to save the new operating mode and leave the NetWare Configuration dialog box (H).
12. Select the **Exit** button from the Printer Administration window to close NEC 1765 Administration software for NetWare (I).

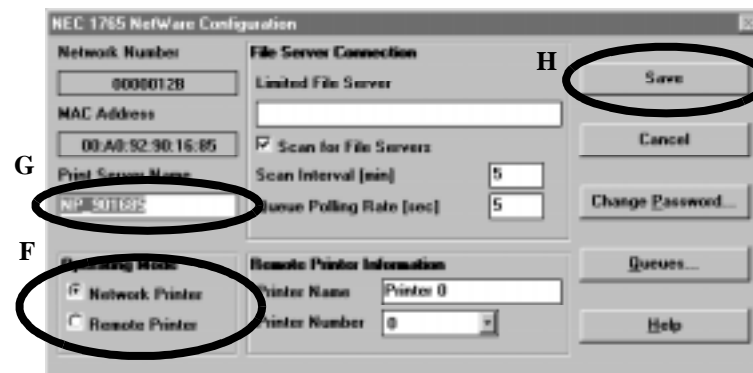
Printer Administration Window



Set the Printer Name



Set the Printer Operating Mode



Establish the Printer on the NetWare Network

This section describes how to define and configure a print queue object, printer object, and print server object using NetWare Administrator for Windows.

note: Before creating the print queue object, printer object, and print server object make sure that the correct bindery context is set for the printing objects' container. This must be done at the file server. An example command to set the bindery context is
`Set Bindery Context = O=<container>`
where *<container>* is the container for the printing objects. Include the bindery context command in the AUTOEXEC.NCF file to set the bindery context automatically each time the server boots.

1. From the workstation, login to the NetWare file server. Make sure you have create privileges.
2. Open NetWare Administrator.
3. In the NetWare Administrator window select the container object in which the printing objects will be created.

Create a Print Queue Object

4. Select the **Create** option from the Objects menu.
5. Select the **Print Queue** object from the Class of New Object list in the New Object dialog box. Click **OK**.
6. In the Create Print Queue dialog box type a name for the print queue in the Print Queue Name text box.
7. Click the **Browse** button to the right of the Print Queue Volume text box.
8. In the Select Object dialog box select the volume from the Objects: list. Click **OK**.
9. Click the **Create** button in the Create Print Queue dialog box to return to the NetWare Administrator window.

Create a Printer Object

10. In the NetWare Administrator window select the container object, then select the **Create** option from the Objects menu.
11. Select the **Printer** object from the Class of New Object list in the New Object dialog box. Click **OK**.
12. In the Create Printer dialog box type the printer name in the Printer Name text box. Click **Create**.

Create a Print Server Object

13. In the NetWare Administration window select the container object, then select the **Create** option from the Objects menu.
14. Select the **Print Server** object from the Class of New Object list in the New Object dialog box. Click **OK**.
15. In the Create Print Server dialog box type the name of the print server in the Print Server Name text box. The print server name must match the name you defined in "Set the Printer Name" on page 4-16. To verify the print server name print a configuration page as described in "Print a Configuration Page" on page 2-13.
16. Click the **Create** button to close the Create Print Server dialog box.

Assign the Print Queue Object to the Printer Object

17. In the NetWare Administration window open the printer object you defined in step 12.
18. In the Printer : *<name>* dialog box click the **Assignments** button.
19. In the Assignments dialog box click the **Add** button.
20. In the Select Object dialog box select the print queue object you defined in step 6. Click **OK**.
21. Click **OK** to close the Printer: *<name>* dialog box.

Assign the Printer Object to the Print Server Object

22. In the NetWare Administration window open the print server object you defined in step 15.
23. In the Print Server : *<name>* dialog box click the **Assignments** button.
24. In the Assignments dialog box click the **Add** button.
25. In the Select Object dialog box select the printer object you defined in step 12. Click **OK**.
26. Click **OK** to close the Print Server : *<name>* dialog box.

Exit NetWare Administrator

27. In the NetWare Administration window select the **Exit** option from the Object menu.

Enable the Remote Printer

If you selected Remote Printer mode, you must also enable the Remote Printer server in order to print documents. The steps to enable the Remote Printer server depend on where the print server resides. (For printers connected in Network Printer mode, the LAN card is the print server.)

Enable the Remote Printer if the Print Server Resides on a File Server (NLM Print Server)

At the NetWare File Server Console, type the command
`load PSERVER <print server>`
 where *<print server>* is the print server you defined in step 8 on page 4-8. In this example, the defined print server is NP_015446 and the command is
`load PSERVER NP_015446`

Enable the Remote Printer if the Print Server Resides on a Workstation (Dedicated DOS Print Server)

1. At the workstation login to the file server as a supervisor.
2. Type the following commands.
`cd f:\public`
`f:\public\pserver.exe <print server>`
 where *<print server>* is the print server you defined in step 8 on page 4-8. In this example, the defined print server is NP_015446 and the commands are
`cd f:\public`
`f:\public\pserver.exe NP_015446`

Enable the Remote Printer if it is Connected to a Workstation With a Parallel Cable

1. From the print server workstation, switch to MS-DOS and run RPRINTER for NetWare 3.1x or NPRINTER for NetWare 4.1.
2. Select the name of the print server you defined in step 8 on page 4-8. In this example, the defined print server is NP_015446.

Windows 95 Using TCP/IP Protocol

This section describes how to add your Silentwriter to the network using Windows 95 operating system software and the TCP/IP network protocol.

Before you begin, make sure that your Windows 95 system is configured for TCP/IP networking. If not, check with your system administrator.

The following steps summarize how to configure your network.

1. Install the software. This includes installing Windows 95 Printing System from NEC, the TCP/IP network protocol, and the Silentwriter printer drivers.
2. Establish the printer on the network.

You can define multiple printers as part of the software installation. If you want to define more printers after you have installed the software follow the steps under “Define New Printer Ports” on page 4-24.

Install Software

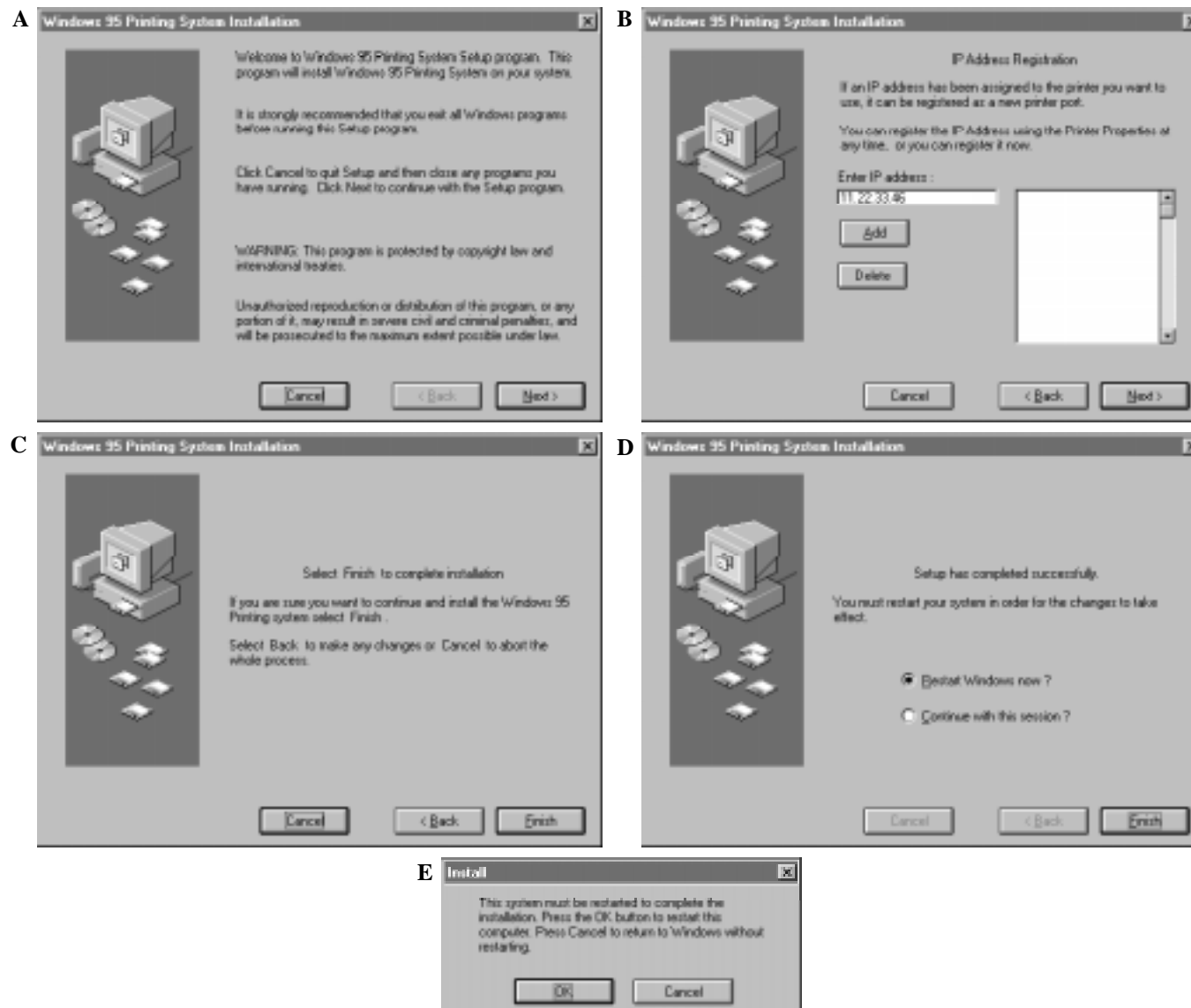
Before you begin you need to know the IP address, subnet mask, and default gateway for the Silentwriter and for your workstation. You also need to know if your network supports Address Resolution Protocol (ARP). The IP address and subnet mask for the Silentwriter can be found on the configuration page. See “Print a Configuration Page” on page 2-13. Your system administrator will know the default gateway, ARP capabilities for your network, and your workstation’s IP address and subnet mask.

The first time you set up the Silentwriter the IP address and subnet mask will have factory default values of 11.22.33.44 and 255.0.0.0 respectively. To change those values see “Changing TCP/IP IP Address” and “Changing TCP/IP Subnet Mask” on page 5-33.

Install the Windows 95 Printing System Utility

These steps describe how to install the Windows 95 Printing System utility that came with your Silentwriter 1765. The dialog boxes are shown on the next page.

1. Boot your system and start Windows.
2. Insert the Windows driver diskette into the appropriate drive (in this example we use drive A:).
3. Select **Run** from the Start menu. Windows displays the Run dialog box.
4. Make sure
a:\win95\setup.exe
appears in the Open field. Click the **OK** button.
5. The Windows 95 Printing System Installation dialog box opens. Click the **Next** button to begin setup (A).
6. The IP Address Registration dialog box opens (B). Enter the IP address for the Silentwriter in the **Enter IP address:** text box. Click the **Add** button to register the IP address as a printer port. Click the **Next** button to move to the next screen.
7. Click **Finish** to complete setup (C).
8. Once setup is complete, click **Restart Windows now?**. Then click the **Finish** button (D).
9. Click **OK** to complete installation and restart Windows (E).



Install TCP/IP Protocol on Windows 95

The Windows 95 network configuration depends on the TCP/IP network software, which is included with Windows 95. Before you begin you need to know the IP address for your workstation. You also need the subnet mask. Check with your system administrator for this information. Follow these steps to install TCP/IP.

1. From Windows 95 open the control panels. (Select the **Start** menu, then the **Settings** submenu, then the **Control Panel** menu option.)
2. Open the **Network** control panel.
3. Select the **Configuration** tab in the Network control panel.
4. See if TCP/IP is listed as one of the installed network components. If TCP/IP has already been installed proceed to step 8.
5. In the Configuration panel click the **Add** button.
6. In the Select Network Component Type dialog box select **Protocol** and click the **Add** button.
7. In the Select Network Protocol dialog box select **Microsoft** from the Manufacturers list, then select **TCP/IP** from the Network Protocols list. Click the **OK** button.
8. In the Configuration panel of the Network control panel, select **TCP/IP** from the Network Components list. Click the **Properties** button.
9. If your network supports ARP, click **Obtain an IP address automatically** in the TCP/IP Properties dialog box. If your network does not support ARP click **Specify an IP address** and enter the IP address and subnet mask.
10. Click the **OK** button to close the TCP/IP Properties dialog box.
11. The System Settings Change dialog box asks if you want to restart your computer. You must restart for the changes to take effect. Click the **Yes** button to restart.

Verify Printer Driver Installation

You should have installed the printer drivers as you completed the steps described in the *Easy Printer Setup Guide*. Follow these steps to verify that the printer drivers have been installed correctly.

1. From Windows 95 open the control panels. (Select the **Start** menu, then the **Settings** submenu, then the **Control Panel** menu option.)
2. Open the **Printers** control panel.
3. The printer drivers are represented by two icons labeled "NEC Silentwriter 1700 Series" and "NEC 1700 Series PostScript L2." If these icons are not visible see Chapter 3 in the *Easy Printer Setup Guide*.

Establish the Printer on the Network

To establish the printer on the network, follow these steps, as illustrated below.

1. From Windows 95 open the control panels. (Select the **Start** menu, then the **Settings** submenu, then the **Control Panel** menu option.)
2. Open the **Printers** control panel.
3. Open the icon representing the driver you wish to use. If you want to use the PCL 5e driver open the **NEC Silentwriter 1700 Series** icon. If you want to use the PostScript driver open the **NEC 1700 Series PostScript L2** icon (A).
4. In the driver window select the **Properties** menu option from the Printer menu.
5. Click on the **Details** tab in the Properties window (B).
6. Open the pull-down menu under **Print to the following port**. Select the TCP/IP port you defined in step 6 on page 4-20.
7. Click the **Capture Printer Port** button in the driver window.
8. In the Capture Printer Port dialog box open the pull-down menu next to **Device**. Select a printer port and click the **Reconnect at logon** checkbox to turn it on. The port will be between LPT1 and LPT9.
9. Click the **OK** button to close the Capture Printer Port dialog box and return to the Details tab of the Properties window.
10. Click the **Apply** button in the Details tab of the Properties window to save the changes.
11. Click the **OK** button to close the Properties window.
12. To close the driver window, select the **Close** option from the Printer menu.

A



B



Define New Printer Ports

If you want to define new printer ports after you have installed the Windows 95 Printing System Utility, follow these steps.

1. From Windows 95 open the control panels. (Select the **Start** menu, then the **Settings** submenu, then the **Control Panel** menu option.)
2. Open the **Printers** control panel.
3. If you want to use the PCL 5e driver open the **NEC Silentwriter 1700 Series** icon. If you want to use the PostScript driver open the **NEC 1700 Series PostScript L2** icon.
4. In the driver window select the **Properties** menu option from the Printer menu.
5. Click on the Details tab of the Properties window.
6. In the Details tab of the Properties window, select the **Add Port** option to open the Add Port dialog box.
7. In the Add Port dialog box click the Other radio button. Select **TCP/IP Printing System** under Other.
8. Click the **OK** button in the Add Port dialog box to open the TCP/IP Printing System dialog box.
9. Enter the Silentwriter's IP address in the TCP/IP Printing System dialog box. Click the **OK** button to close the TCP/IP Printing System dialog box.
10. Click the **Capture Printer Port** button.
11. In the Capture Printer Port dialog box open the pull-down menu next to **Device**. Select a printer port and click the **Reconnect at logon** checkbox to turn it on.
12. Click the **OK** button to close the Capture Printer Port dialog box and return to the Details tab of the Properties window.
13. Click the **Apply** button.
14. Click **OK** to leave the Properties option.
15. To close the driver window, select the **Close** option from the Printer menu.

Windows NT Using TCP/IP Protocol

If you will operate your Silentwriter with a Windows NT server/workstation, you may use either TCP/IP or DLC network protocols. Follow these steps to connect your Silentwriter to a network using TCP/IP network protocol. To connect your Silentwriter to a network using DLC protocol, see page 4-30.

The following steps summarize how to connect your Silentwriter.

1. Install the software.
2. Identify the printer.

These are described in detail below.

Install the Software

Before you begin you will need to know the IP address, subnet mask, printer name, and default gateway for your workstation. Your system administrator will know this information.

The first time you set up the Silentwriter the IP address and subnet mask will have factory default values of 11.22.33.44 and 255.0.0.0 respectively. To change those values see “Changing TCP/IP IP Address” and “Changing TCP/IP Subnet Mask” on page 5-33.

1. From Windows NT open the Main icon.
2. Open the Control Panel icon, then select the **Network** control panel.
3. Select **Add Software** from the Network Settings window.
4. Select **TCP/IP Protocol and Related Components** from the Add Software dialog box. Select **Continue**.
5. Select **TCP/IP Network Printing Support** from the Windows NT TCP/IP Installation Options dialog box. Click **Continue** to add the TCP/IP printing protocol.
6. From the Network Settings dialog box select **TCP/IP Protocol**. Then click the **Configure** button to move to the TCP/IP Configuration dialog box.
7. In the TCP/IP Configuration dialog box type the IP address, subnet mask, and default gateway for the workstation in the text boxes. Click **OK** to leave the TCP/IP Configuration dialog box.
8. Click **OK** to leave the Network Settings menu and reboot Windows NT.

Identify the Printer

Before you begin you will need to know the IP address and printer name for your Silentwriter. This information can be found on the configuration page. See “Print a Configuration Page” on page 2-13.

1. From Windows NT open the Main icon.
2. Open the Control Panel icon, then open the **Printers** control panel.
3. From the Print Manager Control Panel select the **Create Printer** option from the Printer menu.
4. Type the printer name from the configuration page in the **Printer Name** text box. The name can be up to 32 characters long.
5. Select a printer driver from the pulldown list next to Driver in the Create Printer dialog box. For PostScript printing select **HP Laserjet 4/4M Plus PS600**. For PCL printing select **HP Laserjet 4M Plus**.
6. In the Print To... box, scroll down to **Other...** and select it.
7. In the Print Destinations dialog box select **LPR Port** from the Available Print Monitor list. Then click **OK**.
8. From the Add LPR Compatible Printer dialog box, type the IP address in the **Address of Host Providing lpd** text box. Type the printer name in the **Name of Printer on that Machine** text box.
9. Click **OK** to leave the Add LPR Compatible Printer dialog box.
10. If you want to share the printer on the network, select **Share this Printer on Network** in the Create Printer window. Type the printer name in the Share Name text box. Type the location in the Location text box. Click **OK**.
11. Under Default select the newly defined printer.
12. A window will appear with the printer name as the title. Close this window to see a Silentwriter icon in the Print Manager.
13. Close the Print Manager.

UNIX Using TCP/IP Protocol

This section describes how to add your Silentwriter to a network using BSD UNIX and the TCP/IP network protocol.

The following steps summarize how to configure the Silentwriter and your network.

1. Identify the printer.
2. Establish the printer on the host computer.
3. Send documents to the printer.

Identify the Printer

Before you begin you will need to know the IP address and node address for the Silentwriter. This information is included on the configuration page. See “Print a Configuration Page” on page 2-13.

In UNIX networks, each component of the network has a unique IP address. If you need to check the IP address for the Silentwriter, use the ping command as shown in step 3.

Follow these steps to identify the printer on the network.

1. Use a text editor to add the Silentwriter IP address and name to the `/etc/hosts` file on the host computer. The entry in the `/etc/hosts` file has the following format
`<xxx.xxx.xxx.xxx><host name>`
 where `<xxx.xxx.xxx.xxx>` is the IP address and `<host name>` is the printer name you want to use. If you want to use a new IP address, enter the new address in the host table. An example entry is
`11.22.33.26 NP015626`
2. Add the LAN board entry to the host computer's address conversion table with the `arp` command as shown below
`arp -s <host name> <node address>`
 Where `<host name>` is the Silentwriter's name and the `<node address>` is the Silentwriter's MAC address. For example,
`arp -s NP015626 00:A0:92:01:56:26`
3. If you want to check the IP address, use the `ping` command with the Silentwriter name.
`ping NP015626`
 Print out a configuration page to confirm the new IP address. See “Print a Configuration Page” on page 2-13.

Establish the Printer on the Host Computer

You can print documents to the Silentwriter with either the `lpr` or `ftp` command. Once the `/etc/hosts` file contains the IP address and name of your Silentwriter, you may use `ftp` to print documents. If you wish to use the `lpr` command you must

1. Add the Silentwriter to the `/etc/printcap` files
2. Set up remote printing

Add the Silentwriter to the `/etc/printcap` File

The `printcap` file entry has the following form

```
<host name>:\n:lp=:rm=<host name>:rp=<filter>:\nsd=<spool dir>:
```

<host name> is the name defined in the `/etc/hosts` file.

<filter> is one of the following filters:

- `lpb`: No filtering. Use for binary files.
- `lpa`: Change LF to CR+LF. Converts the LF line-feed code (0A) to CR+LF (0D0A).
- `lpbf`: `lpb+FF`. Adds the FF code (0C) to the end of the file.
- `lpaf`: `lpa+FF`. Converts the LF into CR+LF and adds the FF code (0C) to the end of the file.

The default filter is `lpb` but for most print requests you should use `lpa` or `lpaf` to ensure correct formatting for the output.

An example `printcap` file entry is shown below.

```
NP015626:\n:lp=:rm=11.22.33.26:rp=lpaf:sd=/usr/spool/lpd/NP015626:
```

Everything after the “\” appears on the same line with no spaces.

Set Up Remote Printing

Execute the following commands to make a directory for the spooler and enable remote printing.

```
mkdir /usr/spool/lpd/<printer>\nlpsystem -t bsd <host name>\nlpadmin -p <printer> -s <host name>\naccept <printer>\nenable <printer>
```

The host name can be the same as the printer name.

For example,

```
mkdir /usr/spool/lpd/NP015626\nlpsystem -t bsd NP015626\nlpadmin -p NP015626 -s NP015626\naccept NP015626\nenable NP015626
```

Send Documents to the Printer

You may use the `lp`, `lpr`, or `ftp` command to send print jobs to your Silentwriter.

Printing With the `lpr` Command

To use the `lpr` command, enter the following

```
lpr -d<printer name> <file name>
```

where *<printer name>* is the host name.

An example is

```
lpr -dNP015626 test.dat
```

Printing With the `ftp` Command

The `ftp` command is usually used for transferring data between computers on the UNIX platform. The Silentwriter's LAN card supports `ftp` and can receive files from a client. Follow these steps to print using `ftp`.

1. Run `ftp`.
2. At the `ftp` prompt type
`open <IP address>`
 where *<IP address>* is the IP address from the Silentwriter's configuration page.
 You can also type
`open <host name>`
 where *<host name>* is defined with the `lpssystem` command.
3. `Ftp` will prompt you for a user login. Press enter to accept the default value (none).
4. At the `ftp` prompt type
`ascii`
 to set the data transmission mode to `ascii`.
5. At the `ftp` prompt type
`put <filename>`
 where *<filename>* is the name of the data file.
6. When the transfer is complete type
`quit`
 to leave `ftp`.

Windows NT Using DLC Protocol

Before you begin you will need to know the LAN card name and MAC Address. This information is included on the configuration page. See “Print a Configuration Page” on page 2-13.

The following steps summarize how to connect your Silentwriter.

1. Install software.
2. Identify the printer.
3. Establish the printer on the network.

These are described in detail below.

Install the Software

1. From Windows NT open the Main icon.
2. Open the Control Panel icon, then select the **Network** control panel.
3. If DLC Protocol is not listed under Installed Network Software, select **Add Software** from the Network Settings dialog box. Otherwise, skip to step 6.
4. Select **DLC Protocol** from the Add Software dialog box. Click **Continue**.
5. You will need your Windows NT system diskettes or CD-ROM. In the Windows NT Setup dialog box enter the directory for the Windows NT disk. Click **Continue**.
6. Select **OK** to leave the Network Settings dialog box.
7. If you have just installed DLC Protocol, restart your computer.

Identifying the Printer

1. From Windows NT open the Main icon.
2. Open the Control Panel icon. Open the **Print Manager** control panel.
3. Select **Create Printer** from the Printer menu in the Print Manager window. Enter the printer name from the configuration sheet in the **Printer Name** text box.
4. Select the **HP Laserjet 4/4M Plus PS600** driver from the pulldown menu next to Driver in the Create Printer dialog box.
5. In the Create Printer dialog box, type a description of the printer in the **Printer Description** text box.
6. In the Create Printer dialog box click **Print To**.
7. In the Print To box, select the pulldown menu and scroll down to **Other...** Select it to move to the Print Destinations dialog box.
8. From the Available Print Monitor list select **Hewlett-Packard Network Port**. Click **OK** to open the Add Hewlett-Packard Peripheral Port dialog box.
9. Type the LAN card name in the Name text box.
10. Select the Silentwriter's LAN card MAC address from the Card Address list in the Add Hewlett-Packard Peripheral Port dialog box.
11. Click **OK** to leave the Add Hewlett-Packard Peripheral Port dialog box and return to the Create Printer dialog box.
12. If you want to share the Silentwriter click **Share this Printer on the Network** in the Create Printer dialog box. Enter the Share Name and Location.
13. Click **OK** to close the Create Printer dialog box.
14. The Printer Setup dialog box will open. Click **OK** to close the Printer Setup dialog box.

If you want the Silentwriter to be the default printer, select it from the pulldown menu next to Default in the Print Manager window.

AppleTalk

The following steps summarize how to connect your Silentwriter to an AppleTalk network.

1. Select the network.
2. Select the printer.

These are described in detail below.

Select the Network

You may use the Silentwriter printer with either EtherTalk or LocalTalk networks. Your Macintosh is already configured to connect to LocalTalk networks. While EtherTalk can run up to eight times faster than LocalTalk, you must install an EtherTalk-compatible network card in your computer to connect to EtherTalk networks.

Before you begin you will need to know the printer's name. If you are using EtherTalk, you will need to know the printer's EtherTalk zone. This information is included on the configuration page. See "Print a Configuration Page" on page 2-13.

WARNING! AppleTalk depends on unique printer names and AppleTalk zones to prevent conflicts in the network. Check with the system administrator before making any changes in the printer name or AppleTalk zone.

Follow these steps to select the network.

1. Select the **Control Panels** option from the Apple menu.
2. Open the **Network** control panel.
3. In the AppleTalk Connection window, select the icon that represents the network type you want to use, either LocalTalk or EtherTalk.
4. If you are using an EtherTalk network that has been divided into zones, select the appropriate zone.
5. Close the Network control panel.
6. Run the NEC 1765 software for Macintosh.
7. Select the pull-down menu under **AppleTalk Zone** and choose the printer's AppleTalk zone. The factory default zone is "*". For more information see "Changing the Printer's AppleTalk Zone" on page 5-54.
8. The default name of the printer is "NP_" followed by six digits. If you wish, you may change the printer name. Select the current printer name in the scrolling list at the center of the Printer Administration window. Select the **Change Printer Name** button from the Printer Administration window. Enter the new name and select **OK**. For more information see "Changing the Printer Name" on page 5-54.
9. Close the NEC 1765 software.

Select the Printer

Before printing documents, select the Silentwriter using the Chooser. Follow these steps.

1. Select **Chooser** from the Apple menu. The Chooser window appears.
2. At the bottom right side of the Chooser window, make sure that AppleTalk is Active.
3. Select the **AppleTalk Zone** from the scrolling list in the bottom left side of the Chooser window.
4. Select the **LaserWriter** driver icon.
5. Select the name of the Silentwriter you want to use from the scrolling list on the right.
6. Select the **Setup** button at the bottom right of the Chooser window to specify a PPD file.
7. Click the **Auto Setup** button. Make sure that the NEC Silentwriter 1700 PPD file is selected. If not, select it from the scrolling list of printer drivers. Click the **Select** button to leave the Select PPD dialog box and move to the Configure dialog box.
8. Check the list of hardware features to make sure it reflects the features currently installed on your Silentwriter. Hardware features include optional cassettes, duplex and offset trays, and envelope feeders.
9. When satisfied with your selections, select the **OK** button to leave the Configure dialog box.
10. Select the **OK** button to leave the Setup dialog box.
11. Close the Chooser window.

note: If you install additional hardware features in your Silentwriter, use the Configure dialog box to update the printer setup.

LAN Manager v2.2

This section describes how to add your Silentwriter to a network using OS/2 and LAN Manager version 2.2. You need to complete the following steps.

1. Install software. NEC provides software to simplify the configuration process.
2. Identify the printer. Create files to define and activate the printer.
3. Print documents.

Before you begin you will need to know the last ten digits of the MAC address for the printer. This information is included on the configuration page. See "Print a Configuration Page" on page 2-13.

Install Software

Follow these steps to install the NEC printing utilities for OS/2.

1. Insert the NEC diskette containing the OS/2 printing utilities in the appropriate drive. This example uses drive a: and assumes that the hard drive is drive c:.
2. Create a directory on the hard drive called NECPR and copy the NEC LAN Manager utility to that directory.

```
copy a:\OS2\*. * c:\NECPR
```

The following files will be copied to the NECPR directory
ADDPORT.CMD
DELPOR .CMD
PORTCHG.EXE
REMBEU.EXE
REMPRT3.EXE
REMSTAT3.EXE
LANMAN3.TXT
LMSETUP.TXT
3. Move to the NECPR directory.

```
cd c:\NECPR
```

Identify the Printer

This section describes an example of setting the printer for a network which uses LAN Manager. For more information see the on-line help manual that came with your LAN Manager system. The directions in this section assume that you are in the NECPR directory that you created in the previous section.

1. Use the ADDPORT command to create a printer port for each Silentwriter.
 ADDPORT <port name>
 For example,
 ADDPORT LMPORT05
 If the command executes successfully, you will see this message.
 Data successfully added
 Application : PM_SPOLLER_PORT
 Key : \PIPE\<port name>
 Date : ;
2. Create a text file named NECPR.INI in the c:\NECPR directory. Each line in the text file has the format
 NECPR<MAC address> <port name>
 For example,
 NECPRA092901705 LMPORT05
3. Use the REMPT3 command to start remote print service.
 REMPT3 @NECPR.INI
 If the command executes successfully, you will see this message.
 ITC REMOTE PRINT service starting
 (C) Copyright ITC H. Bollman
 Manufacturers 1993. Ver 3.9
 ITC REMOTE PRINT service for
 <port name> started successfully.

4. If you want to share the Silentwriter across the network, use the NET SHARE command. After you enter the NET SHARE command, a prompt appears to ask if you want to create a queue. Type "y" at the prompt to confirm that you want to create a queue.
 NET SHARE
 <share name>=\PIPE\<port name> /PRINT
 For example,
 NET SHARE LMPRNT05=\PIPE\LMPORT05 /PRINT
5. To use the network printer, enter the NET USE command.
 NET USE <device>
 \\<server name>\<share name>
 For example,
 NET USE LPT1 \\LMSERVER\LMPRNT05

You can also use the NET USE command without any parameters to display network resources. For example,
 NET USE

Print a Document

To print a document use the PRINT command.

PRINT /D:<device> <filename>

For example,

PRINT /D:LPT1 CONFIG.SYS

or

PRINT CONFIG.SYS

The default device is LPT1.

OS/2 Warp Server or LAN Server v4.0

This section describes how to add your Silentwriter to a network using OS/2 and Warp Server or LAN Server version 4.0. You need to complete the following steps.

1. Install software. NEC provides software to simplify the configuration process.
2. Identify the printer. Create files to define and activate the printer.
3. Print documents.

Before you begin you will need to know the last ten digits of the MAC address for the printer. This information is included on the configuration page. See “Print a Configuration Page” on page 2-13.

Install Software

Follow these steps to install the NEC printing utilities for OS/2. These directions assume you are at the OS/2 window prompt.

1. Insert the NEC diskette containing the OS/2 printing utilities in the appropriate drive. This example uses drive `a:` and assumes that the hard drive is drive `c:`.
2. Create a directory on the hard drive called `NECPR` and copy the NEC LAN Manager utility to that directory.

```
copy a:\OS2\*. * c:\NECPR
```

The following files will be copied to the `NECPR` directory

```
ADDPORT.CMD
```

```
DELPOR.T.CMD
```

```
PORTCHG.EXE
```

```
REMBEU.EXE
```

```
REMPRT3.EXE
```

```
REMSTAT3.EXE
```

```
LANMAN3.TXT
```

```
LMSETUP.TXT
```

3. Move to the `NECPR` directory.

```
cd c:\NECPR
```

Identify the Printer

This section describes an example of setting the printer for a network which uses Warp Server or LAN Server. The directions in this section assume that you are at the OS/2 prompt and in the `NECPR` directory that you created in the previous section.

1. Use the `ADDPRT` command to create a printer port for each Silentwriter.

```
ADDPRT <port name>
```

For example,

```
ADDPRT LSPORT05
```

If the command executes successfully, you will see this message.

```
Data successfully added
  Application : PM_SPOLLER_PORT
  Key         : \PIPE\<port name>
  Date        : ;
```

2. Create a text file named `NECPR.INI` in the `c:\NECPR` directory. Each line in the text file has the format

```
NECPR<MAC address> <port name>
```

For example,

```
NECPRA092901705 LSPORT05
```

3. Use the `REMPRT3` command to start remote print service.

```
REMPRT3 @NECPR.INI
```

If the command executes successfully, you will see this message.

```
ITC REMOTE PRINT service starting
(C) Copyright ITC H. Bollman
Manufacturers 1993. Ver 3.9
ITC REMOTE PRINT service for
<port name> started successfully.
```

4. Move to the OS/2 Desktop to create a new printer. Open the OS/2 System folder. Then open the Templates folder. Drag the Printer template to open space on the OS/2 Desktop to create a new printer. The Create a Printer dialog box will open automatically.
5. In the Create a Printer dialog box enter the printer name in the **Name** text box. This example uses `LSPRNT05`. Select the Laserjet 4M Plus printer driver from the Printer Driver list. In the **Output Port** text box type `\PIPE\<port name>` where `<port name>` is the port defined in step 1. This example uses `\PIPE\LSPORT05`. Click the **Create** button to leave the Create a Printer dialog box and create the new printer.
6. Click the new printer icon with the right mouse button to see the **Setting** menu for the printer. In this example, the printer icon will be named `LSPRNT05`.
7. Select the **Start Sharing** option from the Setting menu. The Shared Resource Definition dialog box will open.
8. In the Shared Resource Definition dialog box enter the shared printer name in the **Resource** text box. This example uses `LSPRNT05`. You may enter a description in the **Description** text box, for example, Silentwriter 1765. Click the **OK** button to save changes and close the Shared Resource Definition dialog box.
9. To use the network printer, enter the `NET USE` command at the OS/2 prompt.

```
NET USE <device>
\\<server name>\<share name>
```

For example,

```
NET USE LPT1 \\LSSERVER\LSPRNT05
```

Print a Document

To print a document use the PRINT command at the OS/2 prompt.

```
PRINT /D:<device> <filename>
```

For example,

```
PRINT /D:LPT1 CONFIG.SYS
```

or

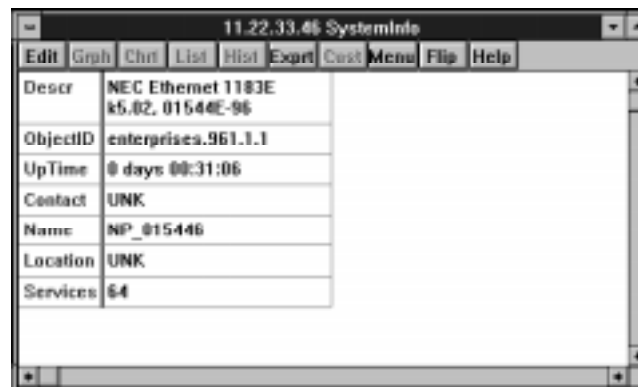
```
PRINT CONFIG.SYS
```

The default device is LPT1.

SNMP

The Silentwriter has limited SNMP capabilities. SNMP recognizes the Silentwriter and displays the information shown below.

Use any SNMP manager to view the following information.



11.22.33.46 SystemInfo	
Edit Graph Chart List Hist Export Copy Menu Flip Help	
Descr	NEC Ethernet 1183E k5.02, 01544E-96
ObjectID	enterprises.961.1.1
UpTime	0 days 00:31:06
Contact	UNK
Name	NP_015446
Location	UNK
Services	64

NEC 1765 ADMINISTRATION SOFTWARE 5



Overview

This chapter describes the NEC 1765 Administration software. It contains the following sections.

- NEC 1765 Software
- NEC 1765 Administration Software for NetWare
- NEC 1765 Administration Software for TCP/IP
- NEC 1765 Software for AppleTalk

NEC 1765 Software

NEC 1765 software allows you to configure and administer the Silentwriter 1765 from your workstation or networked computer. There are three versions of the Administration software.

- NEC 1765 Administration software for NetWare networks on Windows systems
- NEC 1765 Administration software for TCP/IP networks on Windows systems
- NEC 1765 software for AppleTalk networks on Mac OS systems

You may have already installed the NEC 1765 software. If you have not installed your Silentwriter network administration software yet, see Chapter 3, “Installing NEC 1765 Software.”

This chapter describes the software that you installed. If you have a NetWare or TCP/IP network, your software is divided into two applications, NEC 1765 Administration software and NEC 1765 Client software. If you are using Mac OS, you have only one NEC 1765 software application.

The NEC 1765 Administration software allows you to

- Display all printers on the network
- Modify the printer name
- Monitor the printer status
- Check the printer configuration and installed options
- Change the IP address and subnet mask (NetWare and TCP/IP versions only)
- Change the printer operation mode from network printer mode to remote printer mode and back (NetWare version only)
- Change AppleTalk Zones (AppleTalk version only)

note: All users of NEC 1765 software on Mac OS are able to change printer names and AppleTalk Zones. Ask the system administrator before changing this information to prevent system conflicts.

There are two versions of Client software.

- NEC 1765 Client software for NetWare networks on Windows systems
- NEC 1765 Client software for TCP/IP networks on Windows systems

The NEC 1765 Client software allows you to

- Monitor the printer status
- Check the printer configuration and installed options
- Monitor the current print jobs
- Monitor the print queue
- Delete your own print jobs

For information on using NEC 1765 Administration software with NetWare networks on Windows systems, turn to “NEC 1765 Administration Software for NetWare” on page 5-3.

For information on using NEC 1765 Administration software with TCP/IP networks on Windows systems, turn to “NEC 1765 Administration Software for TCP/IP” on page 5-27.

For information on using NEC 1765 with Mac OS systems, turn to “NEC 1765 Software for AppleTalk” on page 5-51.

For information on using NEC 1765 Client software with NetWare or TCP/IP networks on Windows systems, see Chapter 6.

NEC 1765 Administration Software for NetWare

The NEC 1765 Administration software for NetWare allows you to display and modify configuration information for the NEC Silentwriter 1765. The next section describes specific tasks and the steps to complete them. For information about specific windows, dialog boxes, and menu options see page 5-14.

note: Windows 3.1x users may encounter difficulties with Windows resources while using NEC 1765 Administration software for NetWare. If your Windows 3.1x system crashes frequently, try editing your WIN.INI file. To verify that the problem is caused by Windows resources, modify the WIN.INI file so that both load and run commands are empty as shown below. Comment out the original load and run commands by typing a “;” in front of them.

```
load=
;load=nwpopup.exe stbvisn.exe
run=
;run=c:\SWRITER\wspd.exe
```

Then restart Windows. If that helps, experiment with adding one load or run command at a time. You must restart Windows each time the WIN.INI file is edited for changes to take effect. If the problem persists, consider upgrading to Windows 95.

Using NEC 1765 Administration Software for NetWare

This section describes the steps to perform specific network and printer configuration tasks with NEC 1765 Administration software for NetWare. Detailed information about NEC 1765 Administration software windows, dialog boxes, and menus begins on “NEC 1765 Printer Administration Window” on page 5-14.

Displaying Available Printers

You can display a list of available printers on the network and sort and filter the list.

1. Open the NEC 1765 Administration software.
2. The NEC 1765 Printer Administration window displays a list of all printers on the network that are configured to work with NEC 1765 software.

You can sort the list by printer name, MAC address, or network number.

1. Select the **Sort** menu from the Printer Administration window menu bar.
2. Select the sort key from the menu.

You can also filter the list by network number.

1. Select the **Filter** menu from the Printer Administration window menu bar.
2. In the Network Number dialog box select the network number of the printers you wish to display.
3. Click the **OK** button.

Displaying LAN Card Parameters

You can display the LAN card type, firmware version, serial number, and MAC address.

1. Select the printer you want to know about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button or select the **LAN Card** menu option from the Configure menu.
3. The LAN Card Parameters dialog box displays the LAN card information.
4. To leave the LAN Card Parameters dialog box, select the **Save** or **Cancel** button.

Changing the Printer Name

Your LAN card arrives with a factory default name. The factory default name starts with “NP_” followed by six digits. You can use the LAN Card Parameters dialog box to change the printer name.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button or select the **LAN Card** menu option from the Configure menu.
3. The LAN Card Parameters dialog box displays the default and current printer names.
4. Type the new name in the **Printer Name** text box.
5. Select the **Save** button to save the new name and leave the LAN Card Parameters dialog box
Or
Select the **Cancel** button to keep the old name and leave the LAN Card Parameters dialog box.

note: You can restore the factory default name and other default settings by resetting the LAN card. See “Restoring Factory LAN Card Settings” on page 2-8.

Changing the Printer Polling Rate

The printer polling rate determines how often the LAN card obtains status and configuration information from the printer. It is defined in tenths of a second. The default is 50 tenths of a second and the rate can be set to 0 or to any number in the range of 20 to 255 tenths of a second. If the rate is set to 0, the status information will not be updated.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button or select the **LAN Card** menu option from the Configure menu.
3. The LAN Card Parameters dialog box displays the current polling rate.
4. Type the new polling rate in the **Printer Polling Rate** text box.
5. Select the **Save** button to save the new information and leave the LAN Card Parameters dialog box
Or
Select the **Cancel** button to keep the old information and leave the LAN Card Parameters dialog box.

note: Four values define how often status and configuration information is updated in the NEC 1765 software displays. The printer polling rate and busy timeout time describe interactions between the LAN card and the Silentwriter. The status polling rate and response timeout describe interactions between the NEC 1765 software and the LAN card.

Changing the Busy Timeout Time

The busy timeout time determines how long the LAN card waits for information from the printer before setting the printer status to Busy. The timeout time is defined in seconds. The default is 15 seconds and the range is 15 to 255 seconds.

Follow these steps to change the printer response timeout.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button or select the **LAN Card** menu option from the Configure menu.
3. The LAN Card Parameters dialog box displays the current busy timeout time.
4. Type the new busy timeout time in the **Busy Timeout** text box.
5. Select the **Save** button to save the new information and leave the LAN Card Parameters dialog box
Or
Select the **Cancel** button to keep the old information and leave the LAN Card Parameters dialog box.

Displaying NetWare Network Number and MAC Address

You can display the network number and MAC address for printers on NetWare networks.

1. Select the printer you want information about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. The NetWare Configuration dialog box displays the network number and MAC Address.
4. To leave the NetWare Configuration dialog box, select the **Save** or **Cancel** button.

Changing NetWare Print Server Name

You can display and change the print server name. In most cases you should use the same name for the print server and the printer. Use a different name if the print server resides on a separate computer, for example, if the Silentwriter is operating in Remote Printer mode.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. The NetWare Configuration dialog box displays the current print server name.
4. Type the new name in the **Print Server Name** text box.
5. Select the **Save** button to save the new name and leave the NetWare Configuration dialog box
Or
Select the **Cancel** button to keep the old name and leave the NetWare Configuration dialog box.

note: The new print server name will appear in the Printer Administration window and on the configuration page, but will not be reflected in PCONSOLE.

Changing the Printer Operating Mode for NetWare

You can set the operating mode to Network Printer or Remote Printer mode. For a description of operating modes, see “Select the Operating Mode” on page 4-3.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. The NetWare Configuration dialog box displays the current operating mode.
4. Select the button of the new mode.
5. Select the **Save** button to save the new operating mode and leave the NetWare Configuration dialog box
Or
Select the **Cancel** button to keep the old operating mode and leave the NetWare Configuration dialog box.

Changing NetWare Remote Printer Name and Number

If you are using your Silentwriter in Remote Printer mode, you can display and change the remote printer name and number.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. The NetWare Configuration dialog box displays the current print server name.
4. Type the new name in the **Printer Name** text box.
5. Type the new number in the **Printer Number** text box.
6. Select the **Save** button to save the new name and leave the NetWare Configuration dialog box
Or
Select the **Cancel** button to keep the old name and leave the NetWare Configuration dialog box.

Limiting the Silentwriter to a Single File Server

NetWare network operating system software allows a single printer to connect to multiple file servers. You can connect your Silentwriter to up to 8 file servers. On multiple file server networks, the Silentwriter searches for and contacts any file servers reachable through the router. If your NetWare network uses an analog or digital telephone network, for example via an ISDN router, scanning for file servers can result in poor system performance as well as high network costs. To prevent scanning for file servers and limit the printer to only one file server, follow the steps below.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. In the NetWare Configuration dialog box specify a single file server in the Limited File Server text box.
4. Select the **Save** button to save the limited file server and leave the NetWare Configuration dialog box
Or
 Select the **Cancel** button to keep the previous configuration and leave the NetWare Configuration dialog box.

Once you have specified a single file server, the NEC 1765 software will no longer scan for file servers and the scan interval will change to 0.

Changing NetWare File Server Scanning

You may choose whether or not NEC 1765 software will scan for file servers.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. Click the **Scan for File Servers** check box.
4. Select the **Save** button to save the new name and leave the NetWare Configuration dialog box
Or
 Select the **Cancel** button to keep the old name and leave the NetWare Configuration dialog box.

Changing NetWare File Server Scan Interval

If NEC 1765 Administration software is scanning for file servers, you can change the scan interval. The scan interval is measured in minutes and you can choose an interval between 1 and 255 minutes. The default is 5 minutes. If you have specified a limited file server or turned Scan for File Servers off, the scan interval will be set to 0.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. Type the new scan interval in the **Scan Interval** text box.
4. Select the **Save** button to save the new scan interval and leave the NetWare Configuration dialog box
Or
 Select the **Cancel** button to keep the old scan interval and leave the NetWare Configuration dialog box.

Changing NetWare File Server Queue Polling Rate

You can change the queue polling rate. The queue polling rate is measured in seconds and can be between 1 and 255 seconds. The queue polling rate is a measure of the frequency with which the LAN card checks for jobs in the print queue. If the polling rate is set to 5, the LAN card checks the print queue every 5 seconds.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. Type the new queue polling rate in the **Queue Polling Rate** text box.
4. Select the **Save** button to save the new queue polling rate and leave the NetWare Configuration dialog box
Or
Select the **Cancel** button to keep the old queue polling rate and leave the NetWare Configuration dialog box.

Changing NetWare Password

You can change the password for the printer.

note: The printer password must match the password defined in PCONSOLE in order to print documents on the Silentwriter 1765. For more information on setting the password in PCONSOLE, see “Define the Password” on page 4-8.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. Select the **Change Password** button from the NetWare Configuration dialog box to open the Password dialog box.
4. Type the current password in the **Current Password** text box. If no password has been defined, as with new printers, leave **Current Password** blank.
5. Type the new password in the **New Password** text box.
6. Verify the new password by retyping it in the **Confirm Password** text box.
7. Select the **Save** button to save the new password and leave the Password dialog box
Or
Select the **Cancel** button to keep the old password and leave the Password dialog box.
8. To leave the NetWare Configuration dialog box, select the **Save** or **Cancel** button.

Changing TCP/IP IP Address

Follow these steps to change the TCP/IP IP address.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **TCP/IP** button or select the **TCP/IP** menu option from the Configure menu.
3. Type the new IP address in the **IP Address** text box.
4. Select the **Save** button to save the new IP address and leave the TCP/IP Parameters dialog box
Or
Select the **Cancel** button to keep the old IP address and leave the TCP/IP Parameters dialog box.

Changing the TCP/IP Subnet Mask

Follow these steps to change the TCP/IP subnet mask.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **TCP/IP** button or select the **TCP/IP** menu option from the Configure menu.
3. Type the new subnet mask in the **Subnet Mask** text box.
4. Select the **Save** button to save the new subnet mask and leave the TCP/IP Parameters dialog box
Or
Select the **Cancel** button to keep the old subnet mask and leave the TCP/IP Parameters dialog box.

Setting the TCP/IP Auto IP Address

If Auto IP is on, you can use the UNIX commands `arp` and `ping` to change the LAN card's IP address. `arp` is a host command which displays or modifies the host's ARP entry table to assign a MAC address to a known IP address. Follow these steps to set Auto IP to On.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **TCP/IP** button or select the **TCP/IP** menu option from the Configure menu.
3. Set the **Auto IP Address** radio button to **On**.
4. Select the **Save** button to save the new auto IP address selection method and leave the TCP/IP Parameters dialog box

Or

Select the **Cancel** button to keep the old auto IP address selection method and leave the TCP/IP Parameters dialog box.

note: If your network does not support `arp`, changing the Auto IP Address setting has no effect.

Follow these steps to change the LAN card's IP address using Auto IP. You will need to know the host's IP address, the LAN card's old IP address, and the new IP address for the LAN card. Your system administrator will know the old IP address. Print a configuration page to see the LAN card's IP address. See "Print a Configuration Page" on page 2-13.

note: Turn off any other Silentwriters with the same IP address before following these steps.

1. Open the command prompt window.
2. Use the `route` command to add the LAN card's IP address to the ARP table.
`route add <LAN card old IP> <host IP>`
For example,
`route add 11.22.33.44 11.22.33.51`
Some operating systems require a 0 at the end of the `route add` command. Check with your system administrator.
3. Use the `ping` command to get the target LAN card information. Be sure to turn off any other Silentwriters with the same IP address first.
`ping <LAN card old IP>`
For example,
`ping 11.22.33.44`
4. Use the `arp` command to get the LAN card's MAC address.
`arp -a`
The LAN card's MAC address will be displayed.
Interface: <host IP>
Internet Address Physical Address Type
<LAN card old IP><LAN card MAC>dynamic
For example,
Interface: 11.22.33.51
Internet Physical Address Type
11.22.33.44 00-a0-92-01-56-26 dynamic

5. Make a new ARP entry for the LAN card with its new IP address.
`arp -s <LAN card new IP> <LAN card MAC>`
 For example,
`arp -s 11.22.33.26 00-a0-92-01-56-26`
6. Enter ping with the new address.
`ping <LAN card new IP>`
 For example,
`ping 11.22.33.26`
7. Print a configuration page to confirm the new IP address. See “Print a Configuration Page” on page 2-13. Auto IP will be turned off automatically.
8. Delete the old LAN card IP address from the ARP table with the `route` command.
`route delete <LAN card old IP>`
`<host IP>`
 For example,
`route delete 11.22.33.44 11.22.33.51`
 Some operating systems require a 0 at the end of the `route delete` command. Check with your system administrator.

Displaying Silentwriter Printer Configuration

Silentwriter printer information includes the model name, current memory size, current printer emulation, available printer languages, current paper source, and available paper sources.

To see this information

1. Select the printer you want information about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **Printer** button or select the **Printer** menu option from the Configure menu.
3. The Printer Configuration dialog box displays the information.
4. Select the **OK** button to leave the Printer Configuration dialog box.

Displaying Silentwriter Printer Options

To display which options have been installed in your Silentwriter, open the Printer Options dialog box.

1. Select the printer you want information about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **Printer** button or select the **Printer** menu option from the Configure menu.
3. Select the **Options** button from the Printer Configuration dialog box.
4. Select the **OK** button to leave the Printer Options dialog box.
5. Select the **OK** button to leave the Printer Configuration dialog box.

Changing the Status Polling Rate

The status polling rate determines how often the NEC 1765 Administration software requests updates from the LAN card. The rate is defined in seconds with a default value of 30 seconds and a range of 5 to 255 seconds.

note: Setting the polling frequency to 5 seconds can decrease your computer's response time. In most situations, the default value of polling every 30 seconds provides a good balance between polling frequency and system performance.

1. From the Printer Administration window select the **Option** menu.
2. The Time Definition dialog box displays the current polling rate.
3. Type the new polling rate in the **Status Polling Rate** text box.
4. Select the **OK** button to save the new information and leave the Time Definition dialog box
Or
Select the **Cancel** button to keep the old information and leave the Time Definition dialog box.

Changing the Response Timeout

The LAN card response timeout defines how long the NEC 1765 software waits for an update from the LAN card before displaying an error message. The rate is defined in seconds with a default value of 5 seconds and a range of 5 to 255 seconds.

1. From the Printer Administration window select the **Option** menu.
2. The Time Definition dialog box displays the current response timeout.
3. Type the new response timeout in the **Response Timeout** text box.
4. Select the **OK** button to save the new information and leave the Time Definition dialog box
Or
Select the **Cancel** button to keep the old information and leave the Time Definition dialog box.

Using Online Help

NEC 1765 software includes an online help system.

1. From the Printer Administration window select the **Help** menu or the **Help** button.
2. If you selected the Help menu, select the **Index** option.
3. Click a topic to display detailed information.
4. Click the **Index** button to return to the topic list.
5. Click the **Exit** button to leave the online Help system.

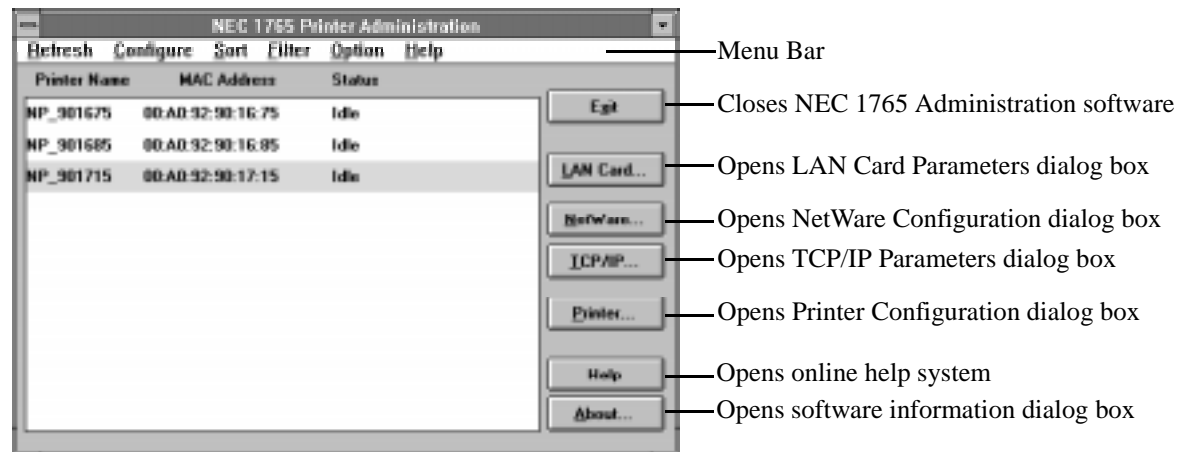
NEC 1765 Printer Administration Window

The Printer Administration window is the main program window for NEC 1765 Administration software. It displays a list of the printers currently connected to the network. The list includes the following printer information:

Printer Name: The printer has a default name of “NP_” followed by six digits. The Configuration dialog box gives you the option of modifying this name.

MAC Address: The Silentwriter’s personal node address.

Status: Displays the current status of the printers. See Appendix A, “Printer Messages,” for a list of printer status messages.



Printer Administration Menu Bar

The Menu Bar provides the following options.

Refresh: Retrieves updated status information from networked printers

Configure: Allows you to display and modify various configuration parameters. Configuration options are also available through the buttons in the Printer Administration window.

note: Select one of the printers in the printer list before selecting any options from the Configure menu.

LAN Card: Displays LAN Card Parameters dialog box. This menu option has the same function as the LAN Card button in the Printer Administration window.

NetWare: Displays NetWare Configuration dialog box. This menu option has the same function as the NetWare button in the Printer Administration window.

TCP/IP: Displays TCP/IP Parameters dialog box. This menu option has the same function as the TCP/IP button in the Printer Administration window.

Printer: Displays Network Printer Configuration dialog box. This menu option has the same function as the Printer button in the Printer Administration window.

Sort: The printers displayed in the window can be sorted in ASCII code sequences for the following items:

- Printer Name
- MAC Address
- Network Number

Filter: The printers displayed in the window can be filtered by network number:

- All Printers (No filtering)
- Network Number

Option: Allows administrator to set the status polling rate and response timeout. The polling rate is how often, in seconds, that the NEC 1765 software queries the LAN card. The response timeout is the time in seconds that the NEC 1765 software waits for a response before a timeout.

Help: Enables the selection of explanations or version information. The online help system and NEC 1765 Administration software dialog box are also available through buttons in the Printer Administration Window.

Index: Displays help index.

About: Displays the About NEC 1765 Administration software dialog box, which includes the version number and release date of the software. This menu option has the same function as the About button in the Printer Administration window.

Printer Administration Buttons

The buttons in the Printer Administration window allow you to select configuration options, access the help system, and exit the NEC 1765 Administration software. Many of these options are also available through the menu system.

Exit: Click this button to leave NEC 1765 Administration software.

LAN Card: Click to open the LAN Card Parameters dialog box. This button has the same function as the LAN Card menu option on the Configure menu.

NetWare: Click to display the NetWare Configuration dialog box. This button has the same function as the NetWare menu option on the Configure menu.

TCP/IP: Click this button to display the TCP/IP Parameters dialog box. This button has the same function as the TCP/IP menu option on the Configure menu.

Printer: Click to display the Network Printer Configuration dialog box. This button has the same function as the Printer menu option on the Configure menu.

Help: Click this button to open the online help system.

About: Click to open the About dialog box, which includes the version number and release date of the software. This button has the same function as the About menu option on the Help menu.

LAN Card Parameters Dialog Box

Open the LAN Card Parameters dialog box by selecting the LAN Card menu option on the Configure menu or by selecting the LAN Card button in the Printer Administration window.

The LAN Card Parameters dialog box includes the following information.

LAN Card Type: The LAN card's hardware type. The NEC Ethernet 1183E permits connections to ethernet-based networks.

MAC Address: The LAN card's personal network address.

Printer Name: The printer can be renamed. You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the printer name.

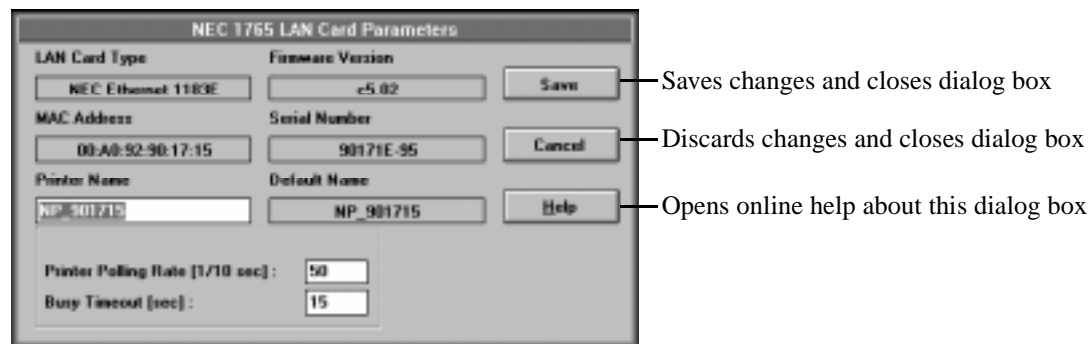
Firmware Version: The LAN card's firmware version.

Serial Number: The serial number of the LAN card.

Default Name: The name of the LAN card set at the factory. The default printer name is "NP_" followed by six digits. An example name is NP_901715.

Printer Polling Rate: Sets the frequency in tenths of a second for how often the LAN card asks the printer for updated status and configuration information. The range is 20 to 255 tenths of a second and the default is 50 tenths of a second. Polling the printer too frequently will affect the printer's processing performance. The default setting provides a good balance between polling frequency and system performance. Setting the value to 0 will prevent updating.

Busy Timeout: Defines the wait time before a timeout when the LAN card queries the printer about its status and configuration. The range is 15 to 255 seconds and the default is 15 seconds.



NetWare Configuration Dialog Box

Open the NetWare Configuration dialog box by selecting the NetWare button in the Printer Administration window or by selecting the NetWare menu option on the Configure menu.

The NetWare Configuration dialog box includes the following information:

Network Number: The network number for the network attributed to the Silentwriter's LAN card.

MAC Address: Displays the LAN card's personal network address.

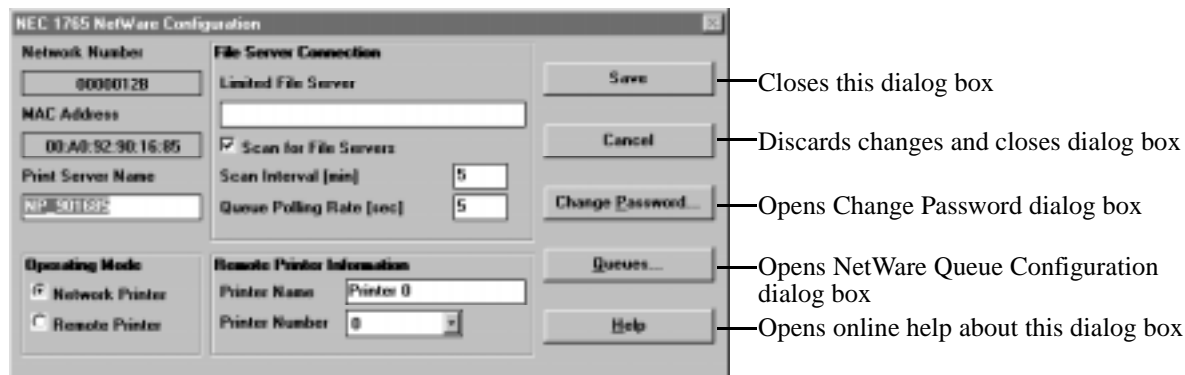
Print Server Name: The print server name for the NetWare environment can be renamed. You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the print server name.

File Server Connection

Limited File Server: NetWare network operating system software allows a single printer to connect to multiple file servers. You can connect your Silentwriter to up to 8 file servers. To limit the printer to only one file server, enter the name of the file server in the Limited File Server text box.

note: Specifying a file server may improve performance time as the NEC 1765 Administration software will no longer scan for file servers. You may want to specify a limited file server even in single server networks.

Scan for File Servers: When this check box has been selected, the NEC 1765 Administration software will update file server information as new file servers are established.



Scan Interval: Sets the frequency in minutes for how often the Silentwriter scans the file server. The range is 1 to 255 minutes and the default is 5 minutes. If a limited file server has been specified or Scan for File Servers is turned off, the scan interval is automatically set to 0 minutes.

Queue Polling Rate: Sets the frequency in seconds for how often the Silentwriter verifies the jobs on the print queue when operating in the Network Printer mode. The range is 1 to 255 seconds and the default is five seconds.

Operating Mode

Use these buttons to select either Network Printer or Remote Printer operating mode.

Remote Printer Information

Printer Name: Specifies the name of the remote printer displayed on the print server screen of the remote print server (which may be a server or a workstation). You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the remote printer name.

Printer Number: Specifies the printer number of the selected remote printer.

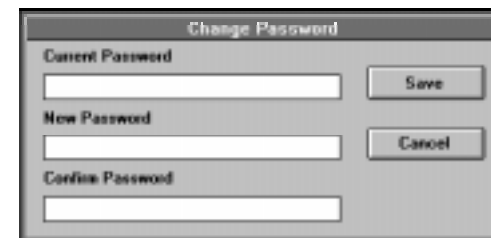
Change Password Dialog Box

You open the Change Password dialog box by selecting the Change Password button in the NetWare Configuration dialog box.

Follow these steps to change the printer password.

1. Enter the current password in the **Current Password** text box. If no password has been defined, as with new printers, leave **Current Password** blank.
2. Type the new password in the **New Password** text box.
3. Retype the new password in the **Confirm Password** text entry box.
4. Click the **Save** button to change the password.

note: If the new password does not match the password defined with PCONSOLE, NetWare will not be able to access the Silentwriter.



NetWare Queue Configuration Dialog Box

Display the NetWare Queue Configuration dialog box by selecting the Queues button in the NetWare Configuration dialog box. Use this dialog box to add and remove print queues assigned to the print server named in the NetWare Configuration dialog box. You must have supervisor authority to make these changes. You can enter the following information.

File Server Name: Selects the file server you are logging into on the network. To login to a file server select the file server from the File Server Name text box and click the Login button. If you have already logged into the file server, the Login button will be dimmed.

Queue Name: Allows you to select a previously defined queue or enter a new queue name.

Priority: Sets the priority for remote printer mode queues. Priorities range from 1 to 10. The default is 1 (highest priority).

Configured Queues: Displays the queues assigned to the print server.

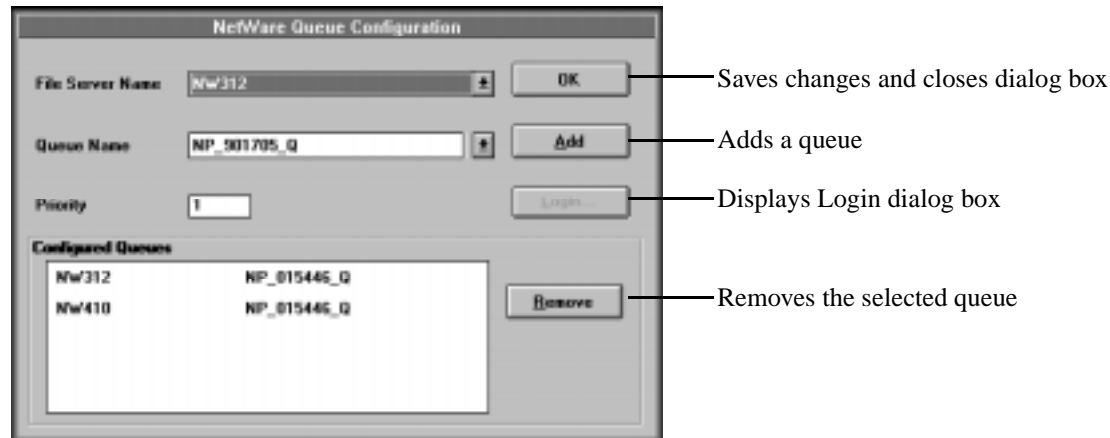
Adding a Queue Assignment

1. Select the queue from the **Queue Name** text box. To add a new queue, type the new name in the **Queue Name** text box.
2. Click the **Add** button in the NetWare Queue Configuration dialog box.

Removing a Queue Assignment

1. Select the queue from the list of Configured Queues.
2. Click the **Remove** button in the NetWare Queue Configuration dialog box.

note: Use PCONSOLE to delete queues permanently.



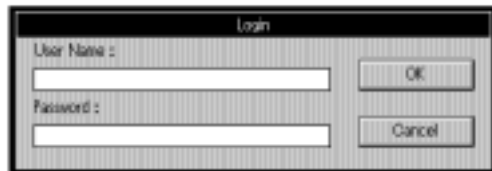
Login Dialog Box

Select the Login button in the NetWare Queue Configuration dialog box to open the Login dialog box. Use the Login dialog box to connect the file server selected in the NetWare Queue Configuration dialog box.

To log in to the selected file server

1. Enter the user name in the **User Name** text box.
2. Enter the password in the **Password** text box.
3. Select the **OK** button to log in.

note: If you want to modify print queues, you must login with supervisor privileges.



TCP/IP Parameters Dialog Box

NEC 1765 Administration software allows you to configure the printer for TCP/IP networks. The TCP/IP Parameters dialog box allows you to configure your LAN card for a TCP/IP network from the NetWare NOS. See “NEC 1765 Administration Software for TCP/IP” on page 5-27 for more information about NEC 1765 Administration software for TCP/IP.

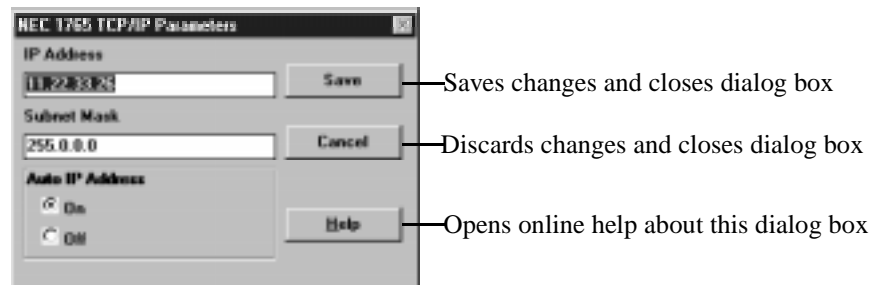
Select the TCP/IP button or select the TCP/IP menu option from the Configure menu in the Printer Administration window to open the TCP/IP Parameters dialog box. The TCP/IP Parameters dialog box allows you to view and modify the IP address and subnet mask.

IP Address: Enter the new IP address in this text box.

Subnet Mask: Enter the new subnet mask in this text box.

Auto IP Address: If Auto IP is on, you can use the UNIX commands `arp` and `ping` to change the LAN card's IP address. `Arp` is a host command which displays or modifies the host's ARP entry table to assign a MAC address to a known IP address. For more information see “Setting the TCP/IP Auto IP Address” on page 5-10.

note: If your network does not support `arp`, changing the Auto IP Address setting has no effect.



Network Printer Configuration Dialog Box

The Network Printer Configuration dialog box opens when you select the Printer button in the Printer Administration window or when you select the Printer option from the Configure menu in the Printer Administration window. The Network Printer Configuration dialog box displays the following information.

Printer Name: The name of the print server. The Silentwriter arrives with a default name of "NP_" followed by 6 digits, for example, NP_901715. You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the printer name.

Model Name: The model name of the printer.

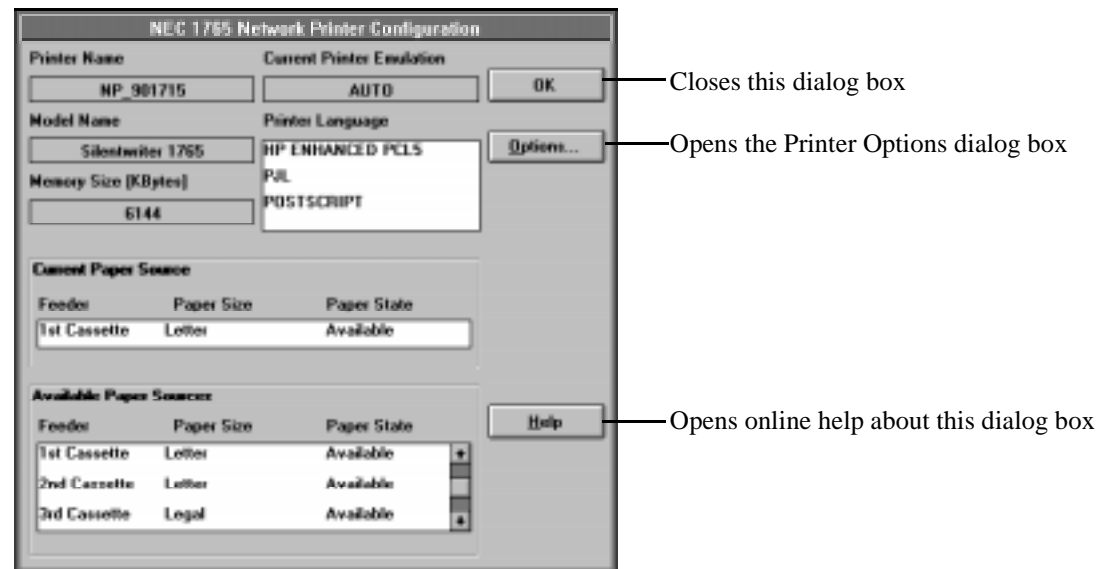
Memory Size: The total amount of memory, in kilobytes, installed in the Silentwriter. The Silentwriter can have from 4 to 54 megabytes of memory. Network printing requires at least 6 megabytes.

Current Printer Emulation: The printer language selected with the printer.

Printer Language: A list of printer languages that can be used with the printer. The Silentwriter recognizes PCL 5e and PostScript Level 2.

Current Paper Source: Displays which paper source will be used, the paper size for the selected source, and paper availability.

Available Paper Sources: Displays a list of the paper sources which can be used with the printer, the paper size for each source, and paper availability.



Printer Options Dialog Box

The Printer Options dialog box opens when you select the Option button in the Printer Configuration dialog box. It displays information about which options are installed in the Silentwriter 1765. Available options include a hard drive, offset trays, up to two extra cassettes, an envelope feeder, and a duplex unit. If a hard drive is installed, the Printer Options dialog box displays its capacity in megabytes. The Printer Options dialog box displays the paper size for installed cassettes and envelope feeders.

note: See the *User's Guide* for information on selecting printer options.



Closes dialog box

Network Number Dialog Box

The Network Number dialog box opens when you select the Network Number option from the Filter menu in the Printer Administration window. To limit the printers that will appear, select a network number or group of numbers from the list and select **OK**.



Discards changes and closes dialog box
Changes parameters and closes dialog box

Option Dialog Box

The Option dialog box appears when you select Option menu option in the Printer Administration window or when you select the Option button in the Printer Administration window.

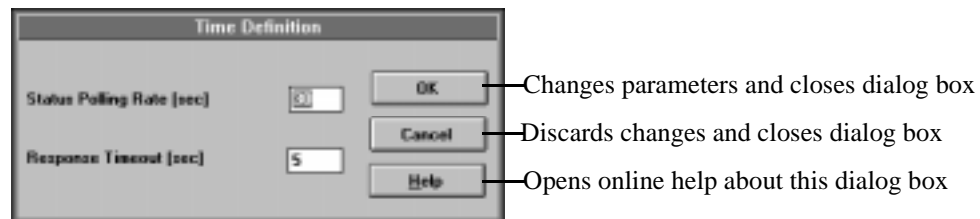
You can set the following information.

Status Polling Rate: Sets how often in seconds the NEC 1765 software queries the LAN card to verify printer configuration and status. The range is 5 to 255 seconds and the default is 30 seconds.

Response Timeout: Sets the wait time in seconds when a response is not received from the printer during printer configuration and status verification. The range is 5 to 255 seconds and the default is 5 seconds.

note: Setting the polling frequency to 5 seconds can decrease your computer's response time. In most situations, the default value of polling every 30 seconds provides a good balance between polling frequency and system performance.

Select the **OK** button from the Option dialog box to save changes and close the dialog box. Select the **Cancel** button from the Option dialog box to cancel changes and close the dialog box. Select the **Help** button to access online help.



About NEC Printer Administration Dialog Box

Select the About button in the Printer Administration window or the About menu option on the Help menu to see this dialog box. The version number and release date are included in this dialog box.



Closes dialog box

NEC 1765 Administration Software for TCP/IP

The NEC 1765 Administration software for TCP/IP allows you to display and modify configuration information for the NEC Silentwriter 1765. The next section describes specific tasks and the steps to complete them. Information about specific windows, dialog boxes, and menu options begins on page 5-38.

note: NEC 1765 Administration software depends on the TCP/IP network protocol. Make sure that the TCP/IP network protocol has been loaded and configured in Windows before running NEC 1765 Administration software. Your system administrator can help with this.

Using NEC 1765 Administration Software for TCP/IP

This section describes the steps to perform specific network and printer configuration tasks with NEC 1765 Administration software for TCP/IP. Detailed information about NEC 1765 Administration software windows, dialog boxes, and menus begins on page 5-38.

Displaying Available Printers

You can display a list of available printers on the network and sort and filter the list.

1. Open the NEC 1765 Administration software.
2. The Printer Administration window displays a list of all printers on the network that are configured to work with NEC 1765 software.

You can change which information is displayed in the list. You can display the printer name or MAC address, the IP address or LAN card type, and the printer status or LAN card firmware version.

1. Select the **Preference** menu option from the Option menu from the Printer Administration window menu bar.
2. In the first column you can select printer name or MAC address. Choose **Printer Name** or **MAC Address** from the menu next to the **1st column** text box.
3. In the second column you can display IP address or hardware type. Choose **IP Address** or **LAN Card Type** from the menu next to the **2nd column** text box.
4. In the third column you can display printer status or LAN card firmware version. Choose **Printer Status** or **LAN Card Firmware Version** from the menu next to the **3rd column** text box.
5. Select the **OK** button to save the new information and leave the Preference dialog box
Or
Select the **Cancel** button to keep the old information and leave the Preference dialog box.

You can sort the list by printer name, MAC address, IP address, LAN card type, or LAN card firmware version.

1. Select the **Sort** menu from the Printer Administration window menu bar.
2. Select the sort key from the menu.

You can also filter the list by IP address.

1. Select the **Filter** menu from the Printer Administration window menu bar.
2. In the IP address dialog box select the IP addresses of the printers you wish to display.
3. Select the **OK** button.

Displaying LAN Card Parameters

You can display the LAN card type, firmware version, serial number, MAC address, and factory default name.

1. Select the printer you want to know about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button or select the **LAN Card** menu option from the Configure menu.
3. The LAN Card Parameters dialog box displays the LAN card information.
4. To leave the LAN Card Parameters dialog box, select the **Save** or **Cancel** button.

Changing the Printer Name

Your Silentwriter arrives with a default name. The default name starts with “NP_” followed by six digits. You can use the LAN Card Parameters dialog box to change the printer name.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button or select the **LAN Card** menu option from the Configure menu.
3. The LAN Card Parameters dialog box displays the default and current printer names.
4. Type the new name in the **Printer Name** text box.
5. Select the **Save** button to save the new name and leave the LAN Card Parameters dialog box
Or
Select the **Cancel** button to keep the old name and leave the LAN Card Parameters dialog box.

Changing the Printer Polling Rate

The printer polling rate determines how often the LAN card obtains status and configuration information from the printer. It is defined in tenths of a second. The default is 50 tenths of a second and the rate can be set to 0 or to any number in the range of 20 to 255 tenths of a second. If the rate is set to 0, the status information will not be updated.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button or select the **LAN Card** menu option from the Configure menu.
3. The LAN Card Parameters dialog box displays the current polling rate.
4. Type the new polling rate in the **Printer Polling Rate** text box.
5. Select the **Save** button to save the new information and leave the LAN Card Parameters dialog box
Or
6. Select the **Cancel** button to keep the old information and leave the LAN Card Parameters dialog box.

note: Four values define how often updated status and configuration information appear in the NEC 1765 software displays. The printer polling rate and busy timeout time describe interactions between the LAN card and the Silentwriter. The status polling rate and response timeout describe interactions between the NEC 1765 software and the LAN card.

Changing the Printer Busy Timeout Time

The printer busy timeout time is how long the LAN card waits for information from the printer before setting the printer status to Busy. The busy timeout time is defined in seconds. The default is 15 seconds and the range is 15 to 255 seconds.

Follow these steps to change the busy timeout time.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button or select the **LAN Card** menu option from the Configure menu.
3. The LAN Card Parameters dialog box displays the current busy timeout time.
4. Type the new busy timeout time in the **Busy Timeout** text box.
5. Select the **Save** button to save the new information and leave the LAN Card Parameters dialog box
Or
Select the **Cancel** button to keep the old information and leave the LAN Card Parameters dialog box.

Displaying NetWare MAC Address

You can display the MAC address for printers on NetWare networks.

1. Select the printer you want information about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. The NetWare Configuration dialog box displays the MAC Address.
4. To leave the NetWare Configuration dialog box, select the **Save** or **Cancel** button.

Changing NetWare Print Server Name

You can display and change the print server name.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. The NetWare Configuration dialog box displays the current print server name.
4. Type the new name in the **Print Server Name** text box.
5. Select the **Save** button to save the new name and leave the NetWare Configuration dialog box
Or
Select the **Cancel** button to keep the old name and leave the NetWare Configuration dialog box.

Changing NetWare Operating Mode

You can set the operating mode to Network Printer or Remote Printer mode.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. The NetWare Configuration dialog box displays the current operating mode.
4. Select the button of the new mode.
5. Select the **Save** button to save the new operating mode and leave the NetWare Configuration dialog box
Or
Select the **Cancel** button to keep the old operating mode and leave the NetWare Configuration dialog box.

Changing NetWare Remote Printer Name and Number

If you are using your Silentwriter in Remote Printer mode, you can display and change the remote printer name and number.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. The NetWare Configuration dialog box displays the current print server name.
4. Type the new name in the **Printer Name** text box.
5. Select the new number from the **Printer Number** menu.
6. Select the **Save** button to save the new name and leave the NetWare Configuration dialog box
Or
 Select the **Cancel** button to keep the old name and leave the NetWare Configuration dialog box.

Limiting the Silentwriter to a Single File Server

NetWare network operating system software allows a single printer to connect to multiple file servers. You can connect your Silentwriter to up to 8 file servers. To limit the printer to only one file server, follow the steps below. Once you have specified a single file server, the NEC 1765 software will no longer scan for file servers and the scan interval will change to 0.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. In the NetWare Configuration dialog box specify a single file server in the Limited File Server text box.
4. Select the **Save** button to save the limited file server and leave the NetWare Configuration dialog box
Or
 Select the **Cancel** button to keep the previous configuration and leave the NetWare Configuration dialog box.

Changing NetWare File Server Scanning

You may choose whether NEC 1765 software will scan for file servers.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. Click the **Scan for File Servers** check box.
4. Select the **Save** button to save the new setting and leave the NetWare Configuration dialog box
Or
Select the **Cancel** button to keep the old setting and leave the NetWare Configuration dialog box.

Changing NetWare File Server Scan Interval

If NEC 1765 Administration software is scanning for file servers, you can change the scan interval. The scan interval is measured in minutes and you can choose an interval between 0 and 255 minutes. The default is 5 minutes. If you have specified a limited file server or Scan for File Servers is turned off, the scan interval will be set to 0.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. Type the new scan interval in the **Scan Interval** text box.
4. Select the **Save** button to save the new scan interval and leave the NetWare Configuration dialog box
Or
Select the **Cancel** button to keep the old scan interval and leave the NetWare Configuration dialog box.

Changing NetWare File Server Queue Polling Rate

You can change the queue polling rate. The queue polling rate is a measure of the frequency with which the LAN card checks the jobs in the print queue. If the polling rate is set to 5, the LAN card checks the print queue every 5 seconds. The queue polling rate is measured in seconds and can be between 1 and 255 seconds.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **NetWare** button or select the **NetWare** menu option from the Configure menu.
3. Type the new queue polling rate in the **Queue Polling Rate** text box.
4. Select the **Save** button to save the new queue polling rate and leave the NetWare Configuration dialog box
Or
 Select the **Cancel** button to keep the old queue polling rate and leave the NetWare Configuration dialog box.

Changing TCP/IP IP Address

Follow these steps to change the TCP/IP IP address.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **TCP/IP** button or select the **TCP/IP** menu option from the Configure menu.
3. Type the new IP address in the **IP Address** text box.
4. Select the **Save** button to save the new IP address and leave the TCP/IP Parameters dialog box
Or
 Select the **Cancel** button to keep the old IP address and leave the TCP/IP Parameters dialog box.

Changing TCP/IP Subnet Mask

Follow these steps to change the TCP/IP subnet mask.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **TCP/IP** button or select the **TCP/IP** menu option from the Configure menu.
3. Type the new subnet mask in the **Subnet Mask** text box.
4. Select the **Save** button to save the new subnet mask and leave the TCP/IP Parameters dialog box
Or
 Select the **Cancel** button to keep the old subnet mask and leave the TCP/IP Parameters dialog box.

Setting TCP/IP Auto IP Address

If Auto IP is on, you can use the UNIX commands `arp` and `ping` to change the LAN card's IP address. `arp` is a host command which displays or modifies the host's ARP entry table to assign a MAC address to a known IP address. Follow these steps to set Auto IP to On.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **TCP/IP** button or select the **TCP/IP** menu option from the Configure menu.
3. Set the **Auto IP Address** radio button to **On**.
4. Select the **Save** button to save the new auto IP address selection method and leave the TCP/IP Parameters dialog box

Or

Select the **Cancel** button to keep the old auto IP address selection method and leave the TCP/IP Parameters dialog box.

note: If your network does not support `arp`, changing the Auto IP Address setting has no effect.

Follow these steps to change the LAN card's IP address using Auto IP. You will need to know the host's IP address, the LAN card's old IP address, and the new IP address for the LAN card. Your system administrator will know the old IP address. Print a configuration page to see the LAN card's IP address. See "Print a Configuration Page" on page 2-13.

note: Turn off any other Silentwriters with the same IP address before following these steps.

1. Open the command prompt window.
2. Use the `route` command to add the LAN card's IP address to the ARP table.
`route add <LAN card old IP> <host IP>`
For example,
`route add 11.22.33.44 11.22.33.51`
Some operating systems require a 0 at the end of the `route add` command. Check with your system administrator.
3. Use the `ping` command to get the target LAN card information. Be sure to turn off any other Silentwriters with the same IP address first.
`ping <LAN card old IP>`
For example,
`ping 11.22.33.44`
4. Use the `arp` command to get the LAN card's MAC address.
`arp -a`
The LAN card's MAC address will be displayed.
Interface: <host IP>
Internet Address Physical Address Type
<LAN card old IP><LAN card MAC>dynamic
For example,
Interface: 11.22.33.51
Internet Physical Address Type
11.22.33.44 00-a0-92-01-56-26 dynamic

5. Make a new ARP entry for the LAN card with its new IP address.
`arp -s <LAN card new IP> <LAN card MAC>`
 For example,
`arp -s 11.22.33.26 00-a0-92-01-56-26`
6. Enter ping with the new address.
`ping <LAN card new IP>`
 For example,
`ping 11.22.33.26`
7. Print a configuration page to confirm the new IP address. See “Print a Configuration Page” on page 2-13. Auto IP will be turned off automatically.
8. Delete the old LAN card IP address from the ARP table with the `route` command.
`route delete <LAN card old IP>`
`<host IP>`
 For example,
`route delete 11.22.33.44 11.22.33.51`
 Some operating systems require a 0 at the end of the `route delete` command. Check with your system administrator.

Displaying Silentwriter Printer Configuration

Silentwriter printer information includes the printer name, model name, current memory size, current printer language, available printer languages, current paper source, and available paper sources.

Follow these steps to see this information.

1. Select the printer you want information about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **Printer** button or select the **Printer** menu option from the Configure menu.
3. The Printer Configuration dialog box displays the information.
4. Select the **OK** button to leave the Printer Configuration dialog box.

Displaying Silentwriter Printer Options

To display which options have been installed in your Silentwriter, open the Printer Options dialog box.

1. Select the printer you want information about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **Printer** button or select the **Printer** menu option from the Configure menu.
3. Select the **Options** button from the Printer Configuration dialog box.
4. Select the **OK** button to leave the Printer Options dialog box.
5. Select the **OK** button to leave the Printer Configuration dialog box.

Changing the Status Polling Rate

The status polling rate determines how often the NEC 1765 software requests updates from the LAN card. The rate is defined in seconds with a default value of 30 seconds and a range of 5 to 255 seconds.

1. From the Printer Administration window select the **Time Definition** option from the Option menu.
2. The Time Definition dialog box displays the current polling rate.
3. Type the new polling rate in the **Status Polling Rate** text box.
4. Select the **OK** button to save the new information and leave the Time Definition dialog box
Or
Select the **Cancel** button to keep the old information and leave the Time Definition dialog box.

Changing the Response Timeout

The response timeout defines how long the NEC 1765 software waits for an update from the LAN card before displaying an error message. The rate is defined in seconds with a default value of 5 seconds and a range of 5 to 255 seconds.

1. From the Printer Administration window select the **Time Definition** option from the Option menu.
2. The Time Definition dialog box displays the current response timeout setting.
3. Type the new response timeout setting in the **Response Timeout** text box.
4. Select the **OK** button to save the new information and leave the Time Definition dialog box
Or
Select the **Cancel** button to keep the old information and leave the Time Definition dialog box.

Using Online Help

NEC 1765 software includes an online help system.

1. From the Printer Administration window select the **Help** menu or the **Help** button.
2. If you selected the Help menu, select the **Index** option.
3. Click a topic to display detailed information.
4. Click the **Index** button to return to the topic list.
5. Click the **Exit** button to leave the online Help system.

Printer Administration Window

The Printer Administration window is the main program window for NEC 1765 Administration software. It displays a list of the printers currently connected to the network. The list includes the following printer information.

Printer Name: The factory default printer name is “NP_” followed by six digits.

IP Address: The LAN card’s IP address set in the Silentwriter. The default IP address is 11.22.33.44

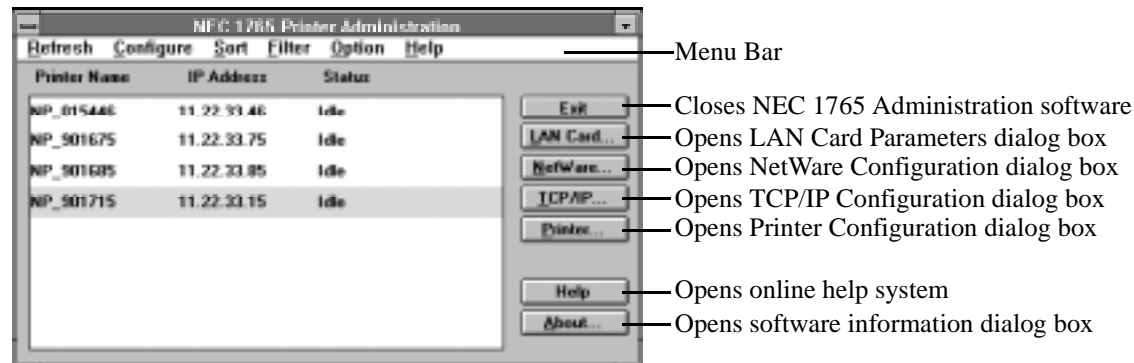
Printer Status: Displays the current status of the printers. See Appendix A, “Printer Messages,” for a list of printer status messages.

Use the Preference menu option on the Option menu to select these additional values.

MAC Address: The LAN card’s personal network address.

Hardware Type: The LAN card’s hardware type.

Firmware Version: The LAN card’s firmware version.



Printer Administration Menu Bar

The Menu Bar provides the following options:

Refresh: Retrieves updated status information from networked printers.

Configure: Enables the selection of LAN card configuration, NetWare configuration, TCP/IP and printer configuration. Configuration options are also available through the buttons in the Printer Administration window.

note: Select one of the printers in the printers list before selecting any options from the Configure menu.

LAN Card: Displays LAN Card Parameters dialog box. This menu option has the same function as the LAN Card button in the Printer Administration window.

NetWare: Displays NetWare Configuration dialog box. This menu option has the same function as the NetWare button in the Printer Administration window.

TCP/IP: Displays TCP/IP Parameters dialog box. This menu option has the same function as the TCP/IP button in the Printer Administration window.

Printer Configuration: Displays Printer Configuration dialog box for the selected printer. This menu option has the same function as the Printer button in the Printer Administration window.

Sort: Use the Sort Menu option to sort the printer display by the following keys:

- printer name
- MAC address
- IP address
- hardware type
- LAN card firmware version

Filter: The Filter menu allows you to specify which printers appear in the Printer Administration window. You can display all Silentwriters on the network or select Silentwriters by IP address.

Option: Option allows you to change time and display settings.

Time Definition: Opens the Time Definition dialog box which allows you to define the status polling rate and response timeout.

Preference: Opens the Preference dialog box which allows you to define which parameters appear in the printer list in the Printer Administration window.

Help: Enables the selection of explanations or version information. The online help system and NEC 1765 Administration software dialog box are also available through buttons in the Printer Administration Window.

Index: Displays the index to the online help system. This menu option has the same function as the Help button in the Printer Administration window.

About: Displays the About NEC 1765 Administration software dialog box, which includes the version number and release date. This menu option has the same function as the About button in the Printer Administration window.

Printer Administration Buttons

The buttons in the Printer Administration window allow you to select configuration options, access the help system, and exit the NEC 1765 Administration software. Many of these options are also available through the menu system.

Exit: Click this button to leave NEC 1765 Administration software.

LAN Card: Click this button to open the LAN Card Parameters dialog box. This button has the same function as the LAN Card menu option on the Configure menu.

NetWare: Click this button to display the NetWare Configuration dialog box. This button has the same function as the NetWare menu option on the Configure menu.

TCP/IP: Click this button to display the TCP/IP Configuration dialog box. This button has the same function as the TCP/IP menu option on the Configure menu.

Printer: Click this button to display the Network Printer Configuration dialog box. This button has the same function as the Printer menu option on the Configure menu.

Help: Click this button to open the online help system.

About: Click this button to display the About dialog box, which includes the version number and release date. This button has the same function as the About menu option on the Help menu.

LAN Card Parameters Dialog Box

Open the LAN Card Parameters dialog box by selecting the LAN Card menu option on the Configure menu or by selecting the LAN Card button in the Printer Administration window.

The LAN Card Parameters dialog box includes the following information.

LAN Card Type: The LAN card's hardware type.

MAC Address: The LAN card's personal network address.

Printer Name: The printer can be renamed. You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the printer name.

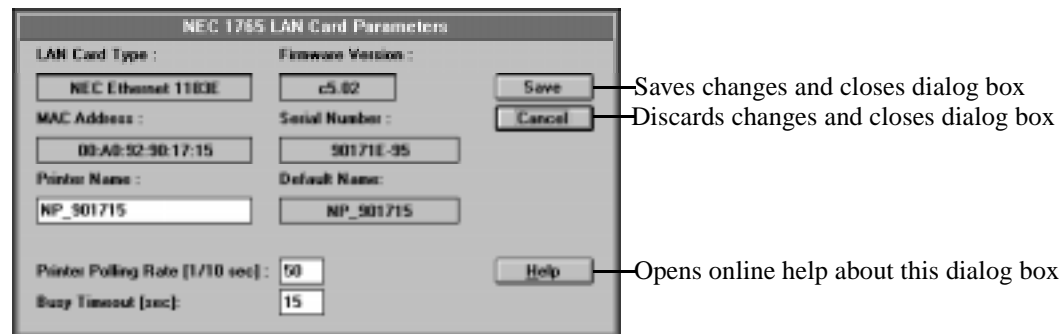
Firmware Version: The LAN card's firmware version.

Serial Number: The serial number of the Silentwriter LAN card.

Default Name: The name of the LAN card set at the factory. The default printer name is "NP_" followed by six digits. An example name is NP_901715.

Printer Polling Rate: Sets the frequency in tenths of a second with which the LAN card requests new status and configuration information from the printer. The range is 20 to 255 tenths of a second and the default is 50 tenths of a second. Setting printer access too frequently will affect the printer's processing performance. Use the default setting unless unavoidable. Setting the value to 0 will prevent updating.

Busy Timeout: Sets the wait time in seconds before a timeout when the server fails to respond. The range is 15 to 255 seconds and the default is 15 seconds.



NetWare Configuration Dialog Box

NEC 1765 Administration software allows you to configure the printer across networks. The NetWare Configuration dialog box allows you to configure a Silentwriter on a NetWare network from a TCP/IP-based network operating system.

The NetWare Configuration dialog box includes the following information.

MAC Address: Displays the LAN card's network address.

Print Server Name: The print server name for the NetWare environment can be changed. You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the print server name.

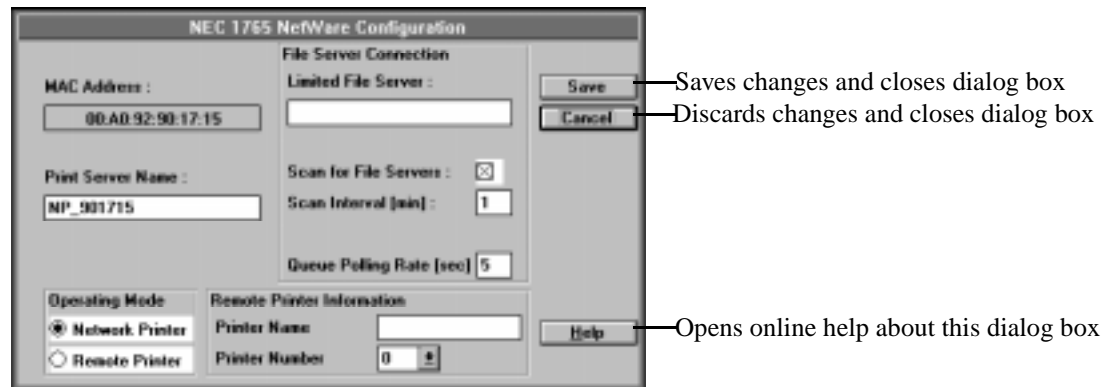
File Server Connection

Limited File Server: NetWare network operating system software allows a single printer to connect to multiple file servers. You can connect your Silentwriter to up to 8 file servers. To limit the printer to only one file server, enter the name of the file server in the Limited File Server text box.

note: Specifying a file server may improve performance time as the NEC 1765 Administration software will no longer scan for file servers. You may want to specify a limited file server even in single server networks.

Scan for File Servers: Logs into the file server on a regular basis when this check box is selected.

Scan Interval: Sets the frequency in seconds with which the Silentwriter scans to the file server. The range is 1 to 255 minutes and the default is 5 minutes. If a limited file server has been specified or Scan for File Servers is turned off, the scan interval is automatically set to 0 minutes.



Queue Polling Rate: Sets the frequency in seconds with which the Silentwriter verifies the jobs on the print queue when operating in network printer mode. The range is 1 to 255 seconds and the default is 5 seconds.

Operating Mode

Use the buttons under Operating Mode to select Network Printer or Remote Printer mode.

Remote Printer Information

Printer Name: Specifies the name of the remote printer displayed on the print server screen of the remote print server, which may be a server or a PC workstation. You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the remote printer name.

Printer Number: Specifies the printer number of the selected remote printer.

TCP/IP Parameters Dialog Box

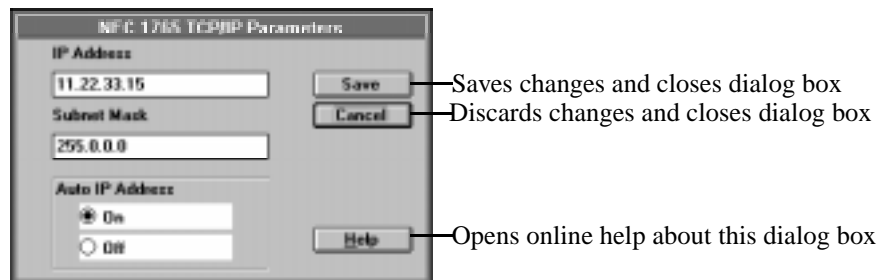
Select the TCP/IP button in the Printer Administration window or select the TCP/IP menu option from the Configure menu to open the TCP/IP Parameters dialog box. The TCP/IP Parameters dialog box allows you to view and modify the IP address and subnet mask.

IP Address: Enter the new IP address in this text entry box.

Subnet Mask: Enter the new subnet mask in this text entry box.

Auto IP Address: If Auto IP is on, you can use the UNIX commands `arp` and `ping` to change the LAN card's IP address. `Arp` is a host command which displays or modifies the host's ARP entry table to assign a MAC address to a known IP address. Follow these steps to set Auto IP to On. For more information see "Setting TCP/IP Auto IP Address" on page 5-34.

note: If your network does not support ARP, changing the Auto IP Address setting has no effect.



Network Printer Configuration Dialog Box

The Network Printer Configuration dialog box opens when you select the Printer button in the Printer Administration window or the Printer menu option from the Configure menu. The Network Printer Configuration dialog box presents specific information about the printer.

Printer Name: The name of the print server. The Silentwriter arrives with a default name of "NP_" followed by 6 digits, for example, NP_901715. You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the printer name.

Model Name: The model name of the printer.

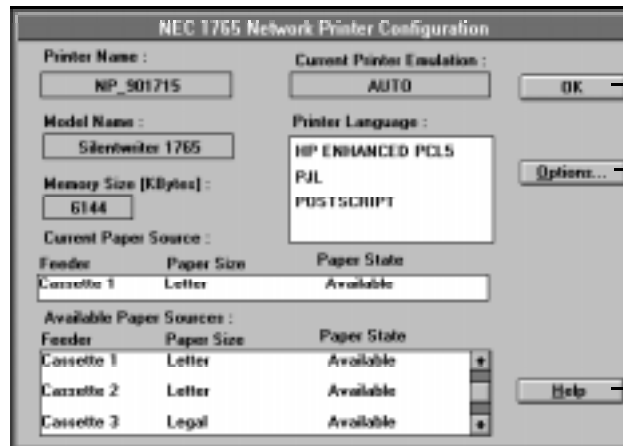
Memory Size: The total amount of memory, in kilobytes, installed in the Silentwriter. The Silentwriter can have from 4 to 54 megabytes of memory. Network printing requires at least 6 megabytes.

Current Printer Emulation: The printer language selected with the printer.

Printer Language: A list of printer languages that can be used with the printer. The Silentwriter recognizes PCL 5e and PostScript Level 2.

Current Paper Source: Displays which paper source will be used, the paper size for the selected source, and paper availability.

Available Paper Sources: Displays a list of the paper sources which can be used with the printer, the paper size for each source, and paper availability.



— Closes dialog box

— Opens the Options dialog box

— Opens online information about this dialog box

Printer Options Dialog Box

The Printer Options dialog box opens when you select the Option button in the Printer Configuration dialog box. It displays information about which options are installed in the Silentwriter 1765. Available options displayed include a hard drive, offset trays, up to two extra cassettes, an envelope feeder, and a duplex unit. If a hard drive is installed, the Printer Options dialog box displays its capacity in megabytes. The Printer Options dialog box displays the paper size for extra cassettes and the envelope feeder.

note: See the *User's Guide* for information on selecting printer options.

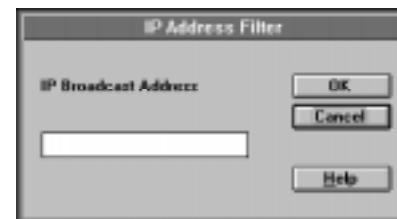


Closes dialog box

IP Address Filter Dialog Box

The Filter menu option allows you to use IP address to specify which printers appear in the Printer Administration window.

Broadcast Address: The Printer Administration window will display only printers that respond to this address. The default broadcast address is 255.255.255.255, which displays all printers.



Time Definition Dialog Box

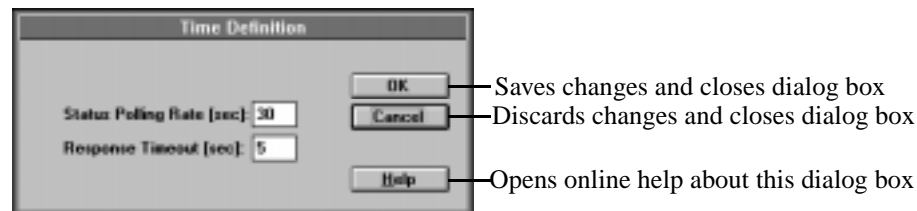
The Time Definition dialog box appears when you select Time Definition menu option from the Option menu in the Printer Administration window.

You can set the following information.

Status Polling Rate: Sets the frequency in seconds with which the NEC 1765 software queries the LAN card to verify printer configuration. The range is 5 to 255 seconds and the default is 30 seconds.

Response Timeout: Sets the wait time in seconds when a response is not received from the printer during printer configuration verification. The range is 5 to 255 seconds and the default is 5 seconds.

Select the **OK** button from the Time Definition dialog box to save changes and close the dialog box. Select the **Cancel** button from the Time Definition dialog box to cancel changes and close the dialog box. Select the **Help** button to access the online help system.



Preference Dialog Box

The Preference dialog box appears when you select the Preference menu option from the Option menu in the Printer Administration window. Use this dialog box to specify which information appears in the Printer Administration dialog box.

First Column: Selects the information to be displayed in the first row of the printer list.

Choices: Printer Name, MAC Address

Default: Printer Name

Second Column: Selects the information to be displayed in the second row of the printer list.

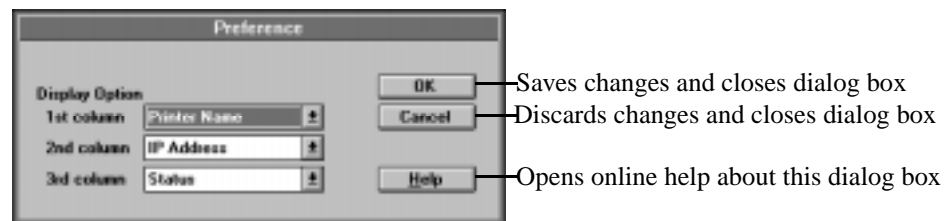
Choices: IP Address, LAN Card Type

Default: IP Address

Third Column: Selects the information to be displayed in the third row of the printer list.

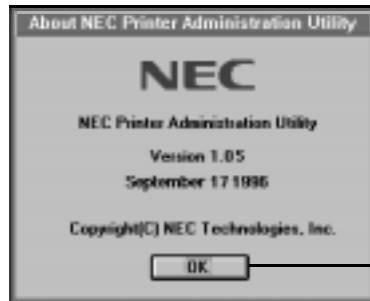
Choices: Status, Firmware Version

Default: Status



About NEC 1765 Administration Dialog Box

Select the About button in the Printer Administration dialog box or the About menu option on the Help menu to open this dialog box, which displays the version number and release date.



Closes dialog box

NEC 1765 Software for AppleTalk

The NEC 1765 software for AppleTalk allows you to display and modify configuration information for the NEC Silentwriter 1765. The next section describes specific tasks and the steps to complete them. For specific information about windows and menu options in NEC 1765 software see page 5-56.

Using NEC 1765 Software for AppleTalk

This section describes the steps to perform specific network and printer configuration tasks with NEC 1765 software for AppleTalk. Detailed information about NEC 1765 software windows and menus can be found on page 5-56.

Displaying Available Printers

You can display a list of available printers on the network.

1. Open the NEC 1765 software by double-clicking on the **NEC 1765 Print Admin** icon in the NEC 1700 Utilities folder.
2. Select the current AppleTalk Zone from the pull-down menu. The factory default zone is “*”. The * zone includes all other zones not listed by NEC 1765 software.
3. The Printer Administration window displays a list of all printers in the selected AppleTalk Zone that are configured to work with NEC 1765 software.
4. Click the **Status Refresh** button to update the printer list manually.

note: NEC 1765 software for AppleTalk displays AppleTalk zones and printers on the local network segment only. To see zones and printers on another side of a router or bridge run NEC 1765 software for AppleTalk on a computer in that segment of the network.

Displaying LAN Card Configuration

You can display the LAN card name, MAC address, factory default name, and firmware version.

1. Select the printer you want to know about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button.
3. The LAN Card Configuration window displays the LAN card information.
4. To leave the LAN Card Configuration window, select the **Save** or **Close** button.

Changing the Printer Polling Rate

The printer status polling rate determines how often the LAN card obtains information from the printer. It is defined in tenths of a second. The default is 50 tenths of a second and the rate can be set to 0 or to any number in the range of 20 to 255 tenths of a second. If the printer polling rate is 0, the printer status will not be updated.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button.
3. The LAN Card Configuration window displays the current polling rate.
4. Type the new polling rate in the **Printer Polling Rate** text box.
5. Select the **Save** button to save the new information and leave the LAN Card Parameters window
Or
Select the **Close** button to keep the old information and leave the LAN Card Parameters window.

Changing the Busy Timeout Time

The printer busy timeout time is how long the LAN card waits for information from the printer before setting the printer status to Busy. The busy timeout time is defined in seconds. The default is 15 seconds and the range is 15 to 255 seconds.

Follow these steps to change the printer busy timeout time.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button.
3. The LAN Card Configuration window displays the current busy timeout time.
4. Type the new delay time in the **Busy Timeout** text box.
5. Select the **Save** button to save the new information and leave the LAN Card Configuration window
Or
Select the **Close** button to keep the old information and leave the LAN Card Configuration window.

note: Four values define how often updated status and configuration information appear in the NEC 1765 software displays. The printer polling rate and busy timeout time describe interactions between the LAN card and the Silentwriter. The status polling rate and response timeout describe interactions between the NEC 1765 software and the LAN card.

Changing AppleTalk Entities

You can display and modify AppleTalk entities for a selected printer. The two default entities are “LaserWriter” and “ITC_Responder.” AppleTalk uses both entities to control communications with printers on the network.

The “LaserWriter” entity is used to communicate between the Macintosh with the LaserWriter driver and the LAN card. If the “LaserWriter” entity is deleted or changed, the printer will not appear in the Chooser window under LaserWriter or LaserWriter 8.

WARNING! Delete the “LaserWriter” entity only if you do not plan to use the Silentwriter with AppleTalk networks.

The “ITC_Responder” entity is used by NEC 1765 software. Only LAN cards with this entity respond to requests from the NEC 1765 software. Change or delete this name if you do not want the Silentwriter to appear in the printer list in the Printer Administration window. For example, change or delete the “ITC_Responder” entity to prevent users from using the NEC 1765 to modify LAN card parameters.

If you have changed or deleted the “LaserWriter” or “ITC_Responder” entities but need to view the Silentwriter in the Chooser or modify the LAN card parameters using the NEC 1765 software, follow the instructions to restore the entity types to factory defaults. See “Restoring Factory LAN Card Settings” on page 2-8.

Follow these steps to display and change AppleTalk entities for a selected printer.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **LAN Card** button.
3. From the LAN Card Configuration window select the **AppleTalk Entity** button.
4. Add an entity type by typing the entity type name in one of the empty text boxes.
5. Select the **Save** button to save the new information and leave the General Parameters window
Or
Select the **Close** button to keep the old information and leave the General Parameters window.

Displaying Silentwriter Printer Information

Silentwriter printer information includes the printer manufacturer, model name, current total installed memory size, current printer language, available printer languages, current paper source, and available paper sources.

To see this information

1. Select the printer you want information about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **Printer Configuration** button.
3. The Printer Configuration window displays the information.
4. Select the **Close** button to leave the Printer Configuration window.

Displaying Silentwriter Printer Options

The Option window displays the options installed in your Silentwriter.

1. Select the printer you want information about from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **Printer Configuration** button.
3. Select the **Options** button from the Printer Configuration window to open the Option window.
4. Select the **Close** button to leave the Option window.
5. Select the **Close** button to leave the Printer Configuration window.

Changing the Printer Name

Your Silentwriter arrives with a factory default name, which starts with “NP_” followed by six digits. Follow these steps to change the printer name.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **Change Printer Name** button.
3. The Change Printer Name window displays the selected printer’s name.
4. Type the new name in the **New Printer Name** text box.
5. Select the **Save** button to save the new name and leave the Change Printer Name window
Or
Select the **Close** button to keep the old name and leave the Change Printer Name window.

Changing the Printer’s AppleTalk Zone

Open the AppleTalk Zoner window to change the printer’s AppleTalk Zone.

1. Select the printer you want to change from the list of printers in the Printer Administration window.
2. From the Printer Administration window click the **AppleTalk Zoner** button.
3. The AppleTalk Zoner window displays the selected printer and its zone.
4. Select the new zone from the **Move to other Zone** list.
5. Select the **Save** button to save the new zone and leave the AppleTalk Zoner window
Or
Select the **Close** button to keep the old zone and leave the AppleTalk Zoner window.

WARNING! AppleTalk depends on unique printer names and AppleTalk zones to prevent conflicts in the network. Check with the system administrator before making any changes in the printer name or AppleTalk zone.

Changing the LAN Card Polling Rate

The LAN Card polling rate determines how often the NEC 1765 software requests updates from the LAN card. The rate is defined in seconds with a default value of 30 seconds and a range of 5 to 255 seconds.

1. Select the **Options** button from the Printer Administration window.
2. The Options window displays the current polling rate.
3. Type the new polling rate in the **Status Polling Rate** text box.
4. Select the **OK** button to save the new information and leave the Options window
Or
 Select the **Cancel** button to keep the old information and leave the Options window.

Changing the LAN Card Response Timeout

The LAN card response timeout time defines how long the NEC 1765 software waits for an update from the LAN card before displaying an error message. The rate is defined in seconds with a default value of 5 seconds and a range of 5 to 255 seconds.

1. Select the **Options** button from the Printer Administration window.
2. The Options window displays the current response timeout.
3. Type the new response timeout in the **Response Timeout** text box.
4. Select the **OK** button to save the new information and leave the Options window
Or
 Select the **Cancel** button to keep the old information and leave the Options window.

Using Online Help

NEC 1765 software includes an online help system.

1. Select the **Help** option from the Apple menu.
2. Select a topic from the pull-down menu to display detailed information.
3. Click the close box in the upper left corner of the Help window to leave the online Help system.

Printer Administration Window

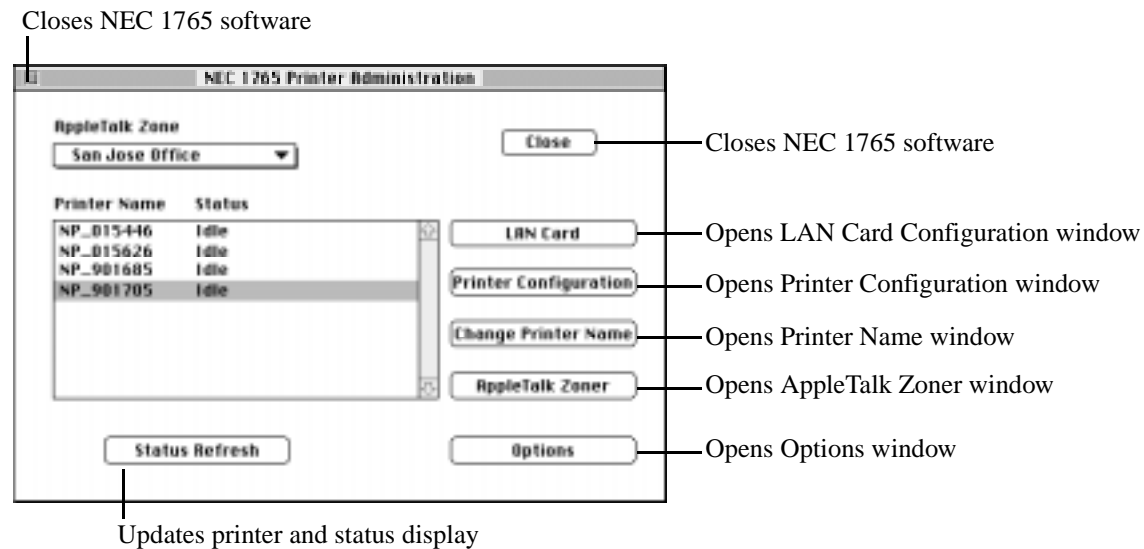
The Printer Administration window provides the following information.

AppleTalk Zone: Select the pull-down menu to see a list of available AppleTalk zones. To change AppleTalk zones, select a new AppleTalk zone from the pull-down menu.

Printer Name: Printers in the selected AppleTalk zone.

Printer Status: Displays the current status of the printers. See Appendix A, "Printer Messages," for a list of printer status messages.

note: NEC 1765 software for AppleTalk displays AppleTalk zones and printers on the local network segment only. To see zones and printers on another side of a router or bridge run NEC 1765 software for AppleTalk on a computer in that segment of the network.



Printer Administration Menu Options

The Printer Administration window includes the following menu options.

About: To see information about the current version of NEC 1765 software, select the About menu option under the Apple menu.

Help: To access the online help system, select the Help menu option under the Apple menu.

Quit: To close the NEC 1765 software, select the Quit menu option under the File menu. This is the same as clicking on the close box in the upper left corner of the Printer Administration window.

Printer Administration Buttons

The buttons in the Printer Administration window allow you to leave NEC 1765 software, select configuration options, and refresh the printer display.

Close: Click this button to leave NEC 1765 software.

LAN Card Configuration: Click this button to open the LAN Card Configuration window.

Printer Configuration: Click this button to display the Printer Configuration window.

Change Printer Name: Click this button to modify the printer name.

AppleTalk Zoner: Click this button to change the printer's AppleTalk zone.

Options: Click this button to set the status polling rate and response timeout time.

Status Refresh: Click this button to update the printer display in the Printer Administration window.

LAN Card Configuration Window

When you select the LAN Card Configuration button in the Printer Administration window, the LAN Card Configuration window opens to provide the following information.

Printer Name: The name of the printer selected in the NEC 1765 Administration software window.

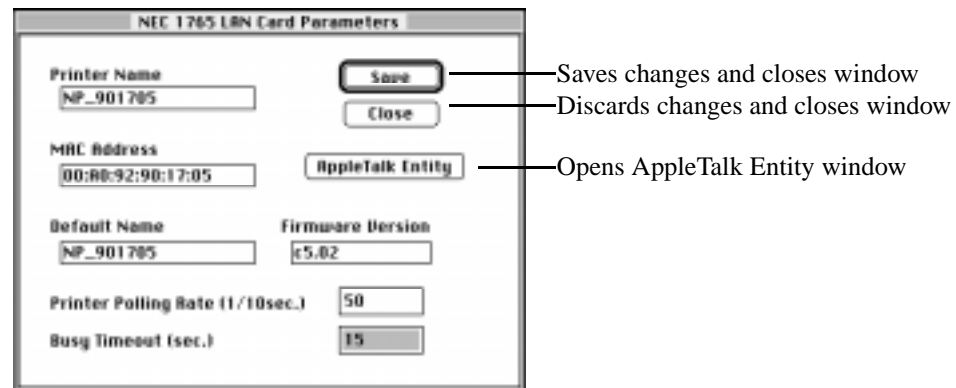
MAC Address: The LAN card's unique network address.

Default Name: The printer name set at the factory.

Firmware Version: The LAN card's firmware version.

Printer Polling Rate: Sets the frequency in tenths of a second with which NEC 1765 software updates the printer configuration display. The range is 2 to 255 tenths of a second. The default is 50 tenths of a second. If the polling rate is set to 0, status information will not be updated.

Busy Timeout: Sets the wait time in seconds before a timeout when the printer fails to respond. The range is 15 to 255 seconds and the default is 15 seconds.



AppleTalk Entity Window

Open the AppleTalk Entity window by selecting the AppleTalk Entity button in the LAN Card Configuration window. The AppleTalk Entity window allows you to see and modify AppleTalk Entities for the selected printer.

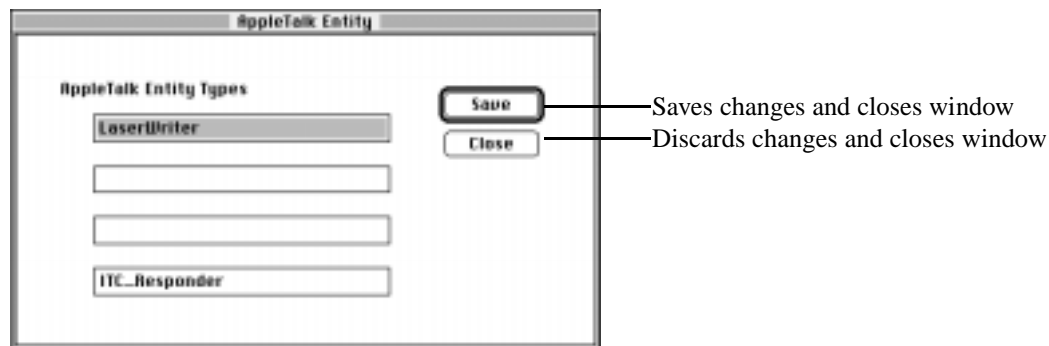
The two default entities are “LaserWriter” and “ITC_Responder.” AppleTalk uses both entities to control communications with printers on the network.

The “LaserWriter” entity is used to communicate between the Macintosh with the LaserWriter driver and the LAN card. If the “LaserWriter” entity is deleted or changed, the printer will not appear in the Chooser window under LaserWriter or LaserWriter 8.

WARNING! Delete the “LaserWriter” entity only if you do not plan to use the Silentwriter with AppleTalk networks.

The “ITC_Responder” entity is used by NEC 1765 software. Only LAN cards with this entity respond to requests from the NEC 1765 software. Change or delete this name if you do not want the Silentwriter to appear in the printer list in the Printer Administration window. For example, change or delete the “ITC_Responder” entity to prevent users from using the NEC 1765 to modify LAN card parameters.

If you have changed or deleted the “LaserWriter” or “ITC_Responder” entities but need to view the Silentwriter in the Chooser or modify the LAN card parameters using the NEC 1765 software, follow the instructions to restore the entity types to factory defaults. See “Restoring Factory LAN Card Settings” on page 2-8.



Network Printer Configuration Window

Select the Printer Configuration Button in the Printer Administration window to open the Network Printer Configuration window.

Printer Name: The name of the printer. The Silentwriter arrives with a default name of “NP_” followed by 6 digits, for example, NP_901705. You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the printer name.

Model Name: The model name of the printer.

Memory Size: The total amount of memory, in kilobytes, installed in the Silentwriter. The Silentwriter can have from 4 to 54 megabytes of memory. Network printing requires at least 6 megabytes.

Current Printer Emulation: The printer language currently selected for the printer.

Printer Language : A list of printer languages that can be used with the printer. The Silentwriter recognizes PCL 5e and PostScript Level 2.

Current Paper Source: Displays the printer’s selected paper source, the paper size for the selected source, and paper availability.

Available Paper Sources: Displays a list of the paper sources which can be used with the printer, the paper size for each source, and paper availability.

NEE 1765 Network Printer Configuration

Printer Name: NP_901705

Model Name: Silentwriter 1765

Memory Size (KBytes): 6144

Current Printer: AUTO

Printer Language: HP ENHANCED PCL5, PCL, POSTSCRIPT

Current Paper source:

Feeder	Paper Size	Paper State
Cassette 1	Letter	Available

Available Paper Sources:

Feeder	Paper Size	Paper State
Manual feed	Letter	Available
Cassette 1	Letter	Available
Cassette 2	Letter	Available
Cassette 3	Legal	Available

Close

Options

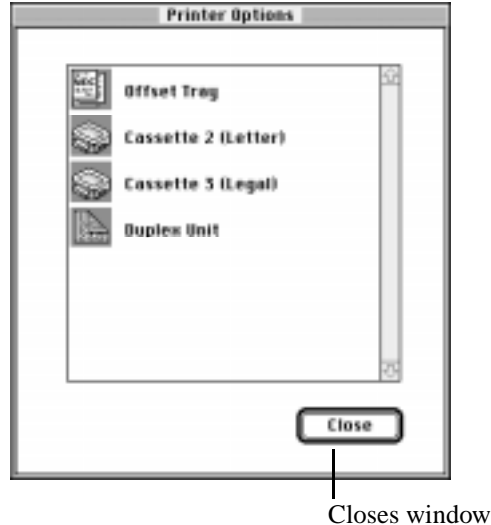
— Closes window

— Opens Option window

Option Window

The Printer Options window opens when you select the Options button in the Printer Configuration window. It displays information about which options are installed in the Silentwriter 1765. Available options include a hard drive, offset trays, up to two extra cassettes, an envelope feeder, and a duplex unit. If a hard drive is installed, the Printer Options window displays its capacity in megabytes. The Printer Options window displays the paper size for extra cassettes and the envelope feeder.

note: See the *User's Guide* for information on selecting printer options.



Printer Name Window

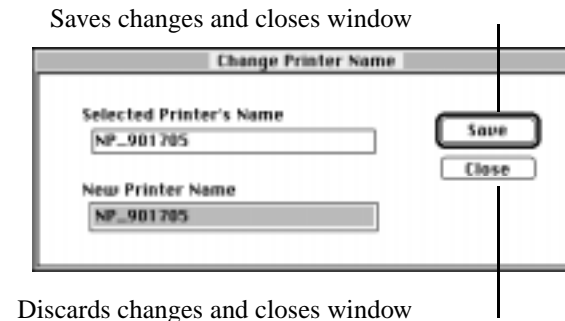
Open the Printer Name window by selecting the Change Printer Name button in the Printer Administration window.

Changing the Printer Name

Follow these steps to change the name of the selected printer.

1. Enter the new name of the printer in the **New Printer Name** box
2. Select the **Save** button.

You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the printer name.



AppleTalk Zoner Window

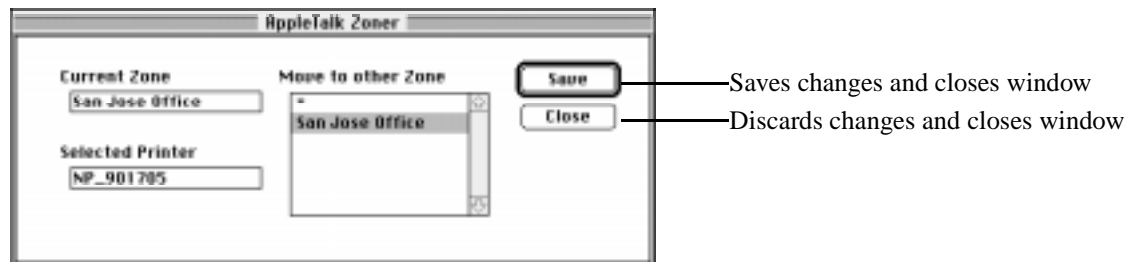
The AppleTalk Zoner window allows you to change the AppleTalk zone for the selected printer. Open the AppleTalk Zoner window by selecting the AppleTalk Zoner button in the Printer Administration window.

Current Zone: Displays the zone currently attributed to the printer.

Printer Name: Displays the selected printer name.

Move to other Zone: Select the new zone for the printer from this list.

To keep the new zone, select the **Save** button. To leave this window without modifying the printer's AppleTalk zone, select the **Close** button.



Time Definition Window

Select the Options button in the Printer Administration window to change the time settings for the NEC 1765 software.

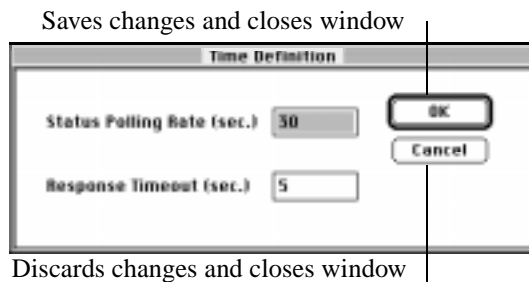
Status Polling Rate: Sets the frequency in seconds with which the Silentwriter updates the printer configuration display. The range is 5 to 255 seconds and the default is 30 seconds.

Response Timeout: Sets the wait time in seconds before a timeout when the printer fails to respond. The range is 5 to 255 seconds and the default is 5 seconds.

note: Changes in the status polling rate and response timeout are only saved while the software is running. Once you exit the NEC 1765 software, the status polling rate and response timeout reset to their default values.

About Window

Open the About window by selecting the About menu option from the Apple menu. The About window displays the NEC 1765 software version number and release date. To close the window click the mouse button anywhere on the screen.



NEC 1765 CLIENT SOFTWARE 6



Overview

This chapter describes the NEC 1765 Client software. It contains the following sections.

- NEC 1765 Client Software
- NEC 1765 Client Software for NetWare
- NEC 1765 Client Software for TCP/IP

NEC 1765 Client Software

NEC 1765 software allows you to configure and administer the Silentwriter 1765 from your workstation or networked computer. There are two versions of the software.

- NEC 1765 Client software for NetWare networks on Windows systems
- NEC 1765 Client software for TCP/IP networks on Windows systems

You may have already installed the NEC 1765 software. If you have not installed your Silentwriter network administration software yet, see Chapter 3, “Installing NEC 1765 Software.”

This chapter describes NEC 1765 Client software for NetWare networks and TCP/IP networks on Windows systems. NEC 1765 Client software allows you to

- Monitor the printer status
- Check the printer configuration

For information on using NEC 1765 Client software with NetWare networks on or Windows systems, turn to the next section.

For information on using NEC 1765 Client software with TCP/IP networks on Windows systems, turn to page 6-12.

NEC 1765 Client Software for NetWare

The NEC 1765 Client software for NetWare allows you to monitor the printer status, check the printer configuration, and monitor current print jobs. The following section describes specific tasks and the steps to complete them. For detailed information about windows, dialog boxes, and menu options in NEC 1765 Client software see page 6-6.

note: NEC 1765 Client software for NetWare uses a NetWare active connection. If the current number of NetWare active connections is equal to the number specified in the maximum user license, you will not be able to see any printers in the NEC 1765 Client software until another user logs out to reduce the number of NetWare active connections. For best performance, limit active connections to at least one less than the number specified in the maximum user license.

note: Windows 3.1x users may encounter difficulties with Windows resources while using NEC 1765 Client software for NetWare. If your Windows 3.1x system crashes frequently, try editing your WIN.INI file. To verify that the problem is caused by Windows resources, modify the WIN.INI file so that both load and run commands are empty as shown below. Comment out the original load and run commands by typing a “;” in front of them.

```
load=
;load=nwpopup.exe stbvisn.exe
run=
;run=c:\SWRITER\wspd.exe
```

Then restart Windows. If that helps, experiment with adding one load or run command at a time. You must restart Windows each time the WIN.INI file is edited for changes to take effect. If the problem persists, consider upgrading to Windows 95.

Using NEC 1765 Client Software for NetWare

This section describes the steps to perform specific tasks with NEC 1765 Client software for NetWare. Detailed information about NEC 1765 Client windows, dialog boxes, and menus can be found on page 6-6.

Displaying Printer Status

You can display information about the current printer.

1. Open the NEC 1765 Client software.
2. The NEC 1765 Network Printer Client Access window displays pull-down menus for file servers, queues and printers.
3. Select the file server from the File Server Name menu.
4. Select the queue from the Queue Name menu.
5. Select the printer from the Printer Name menu.
6. Look for the printer status information in the upper left corner of the Network Printer Client Access window.

Displaying Current Print Jobs

Current print jobs are displayed in the Network Printer Client Access window.

1. The NEC 1765 Network Printer Client Access window displays pull-down menus for file servers, queues and printers.
2. Select the file server from the File Server Name menu.
3. Select the queue from the Queue Name menu.
4. Select the printer from the Printer Name menu.
5. The current print jobs are listed in the center of the Network Printer Client Access window.

Deleting Your Current Print Jobs

Delete your current print jobs from the Network Printer Client Access window.

note: You may only delete your own print jobs. Jobs which do not belong to you are displayed in gray. Only the owners or the supervisor may delete those jobs.

1. The NEC 1765 Network Printer Client Access window displays pull-down menus for file servers, queues and printers.
2. Select the file server from the File Server Name menu.
3. Select the queue from the Queue Name menu.
4. Select the printer from the Printer Name menu.
5. The current print jobs are listed in the center of the Network Printer Client Access window.
6. Select the print job you wish to delete by clicking on it.
7. Select the **Delete** button.

Attaching File Servers

To attach to a file server

1. From the Printer Client Access window click the **File Server** button or select the **File Server** menu.
2. The Network File Servers dialog box displays lists of attached and available file servers.
3. Select the file server you wish to attach from the list of available file servers.
4. Select the **Attach** button.
5. The Login dialog box will open.
6. Type your user name in the **User Name** text box.
7. Type your password in the **Password** text box.
8. Select the **OK** button to login to the server and close the Login dialog box.
9. Select the **OK** button to leave the Network File Servers dialog box.

Detaching File Servers

To detach from a file server

1. From the Printer Client Access window click the **File Server** button or select the **File Server** menu.
2. The Network File Servers dialog box displays lists of attached and available file servers.
3. Select the file server you wish to detach from the list of attached file servers.
4. Select the **Detach** button.
5. Select the **OK** button to leave the Network File Servers dialog box.

note: When you login to two or more file servers, you can detach from each file server independently.

Displaying Silentwriter Printer Information

Silentwriter printer information includes the printer name, model name, current installed memory, current printer emulation, available printer languages, current paper source, and available paper sources.

To see this information

1. Select the file server from the File Server Name menu.
2. Select the queue from the Queue Name menu.
3. Select the printer you want information about from the list of printers in the Printer Client Access window.
4. From the Printer Client Access window click the **Printer** button or select the **Printer** menu option from the Configure menu.
5. The Printer Configuration dialog box displays the information.
6. Select the **OK** button to leave the Printer Configuration dialog box.

Displaying Silentwriter Printer Options

To display which options have been installed in your Silentwriter, open the Printer Options dialog box.

1. Select the printer you want information about from the list of printers in the Printer Client Access window.
2. From the Printer Client Access window click the **Printer** button or select the **Printer** menu option from the Configure menu.
3. Select the **Options** button from the Printer Configuration dialog box.
4. Select the **OK** button to leave the Printer Options dialog box.
5. Select the **OK** button to leave the Printer Configuration dialog box.

Changing the Status Polling Rate

The status polling rate determines how often the NEC 1765 Client software requests updates from the LAN card. The rate is defined in seconds with a default value of 30 seconds and a range of 5 to 255 seconds.

1. From the Printer Client Access window select the **Option** menu.
2. The Time Definition dialog box displays the current polling rate.
3. Type the new polling rate in the **LAN Card Polling Rate** text box.
4. Select the **OK** button to save the new information and leave the Time Definition dialog box
Or
 Select the **Cancel** button to keep the old information and leave the Time Definition dialog box.

Changing the Response Timeout

The LAN card response timeout defines how long the NEC 1765 Client software waits for an update from the LAN card before displaying an error message. The rate is defined in seconds with a default value of 5 seconds and a range of 5 to 255 seconds.

1. From the Printer Client Access window select the **Option** menu.
2. The Time Definition dialog box displays the current response time.
3. Type the new response time in the **LAN Card Response Time** text box.
4. Select the **OK** button to save the new information and leave the Time Definition dialog box
Or
 Select the **Cancel** button to keep the old information and leave the Time Definition dialog box.

Using Online Help

NEC 1765 software includes an online help system.

1. From the Printer Client Access window select the **Help** menu or the **Help** button.
2. If you selected the Help menu, select the **Index** option.
3. Click a topic to display detailed information.
4. Click the Index button to return to the topic list.
5. Select the **Exit** option from the File menu to quit.

NEC 1765 Network Printer Client Access Window

When you open NEC 1765 Client software for NetWare you will begin in the Printer Client Access window. This window provides the following information about the currently selected printer.

- The current printer status
- The current file server
- The current queue
- The current print jobs

The Printer Client Access window is the main program window for NEC 1765 Client software. It displays the following information.

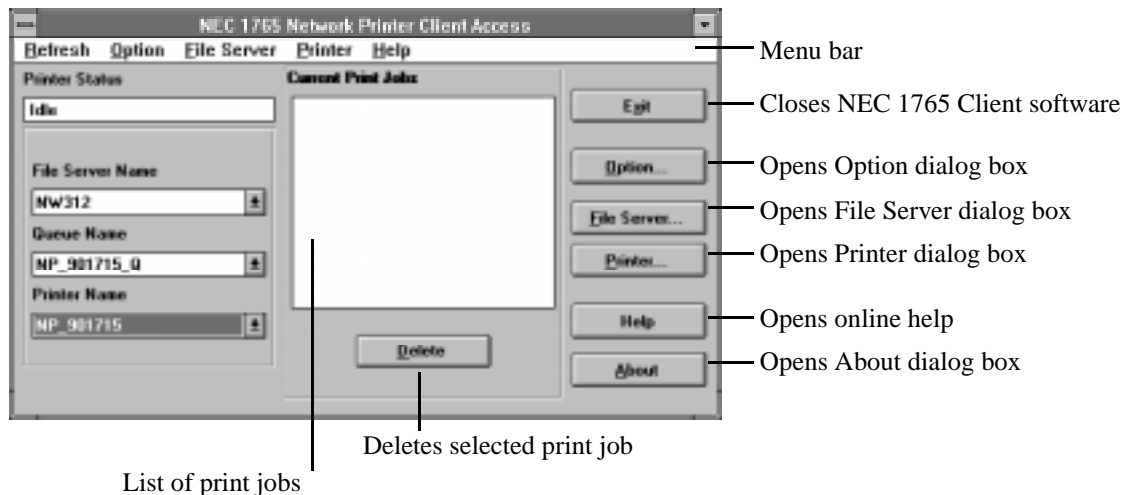
Printer Status: Displays the status of the printer selected with the Printer Name box.

File Server Name: Use this to select the file server.

Queue Name: Use this to select the queue registered in the selected file server. For remote printers, the queue does not reside with the file server.

Printer Name: Use this to select the printers assigned to selected queues.

Current Print Jobs: Displays the print jobs held within the selected queue. Your print requests are shown in black. Print requests from other users are shown in gray. You can only delete your own print requests. Other print requests may be deleted by your system administrator. To delete a print job, select the job and then select the Delete button.



Network Printer Client Access Menu Bar

The menu bar in the Network Printer Client Access window provides the following options.

Refresh: Retrieves updated status information from the current printer.

Option: Displays the Time Definition dialog box for changing the software polling rate and response time. This menu has the same function as the Option button.

File Server: Displays the File Servers dialog box.

Printer: Displays the Printer Configuration dialog box. This menu has the same function as the Printer button.

Help: Displays the online help system. You have a choice of the following two options.

Index: Displays help menu.

About: Displays information about NEC 1765 Client software.

Network Printer Client Access Buttons

The buttons in the Network Printer Client Access window allow you to modify attached file servers, select configuration options, access the help system, and exit the NEC 1765 Client software. Many of these options are also available through the menu system.

Exit: Click this button to leave NEC 1765 Client software.

Option: Click this button to display the Time Definition dialog box for changing the software polling rate and response time. This button has the same function as the Option menu.

File Server: Click this button to display the File Servers dialog box. This button has the same function as the Printer menu option on the File Server menu.

Printer: Click this button to display the Network Printer Configuration dialog box. This button has the same function as the Printer menu option on the Configure menu.

Help: Click this button to open the online help system.

About: Click this button to display information about NEC 1765 Client software.

Delete: Click this button to delete the selected print job from the queue. You can only select and delete your own print jobs.

Time Definition Dialog Box

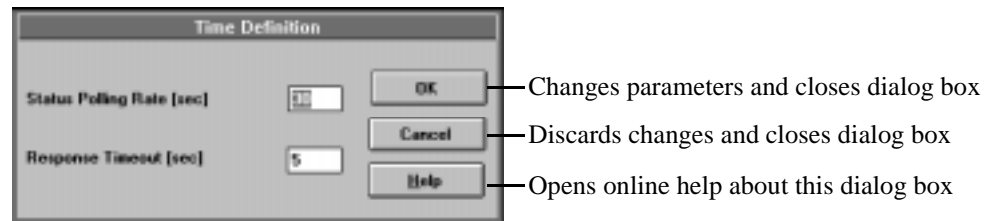
The Time Definition dialog box appears when you select Option menu option in the Network Printer Client Access dialog box or when you select the Option button in the Network Printer Client Access dialog box.

You can set the following information.

Status Polling Rate: Sets the frequency in seconds with which the NEC 1765 Client software queries the LAN card to verify printer status and configuration. The range is 5 to 255 seconds and the default is 30 seconds.

Response Timeout: The amount of time in seconds that the NEC 1765 Client software waits for a response from the LAN card before generating a timeout. The range is 5 to 255 seconds and the default is 5 seconds.

Select the **OK** button to change the parameters and close the dialog box. Select the **Cancel** button from the Options dialog box to cancel changes and close the dialog box. Select the **Help** button to access online help.



File Servers Dialog Box

The File Servers dialog box allows you to attach and login to and detach and logout from file servers. Open the File Servers dialog box by selecting File Servers from the menu in the Network Printer Client Access window or by selecting the File Servers button in the Network Printer Client Access window.

The File Server dialog box is shown below. It provides the following displays.

Attached File Servers: Displays file servers which you have attached and logged into. To logout and detach from a file server, select the file server in the Attached File Servers dialog box and select the **Detach** button.

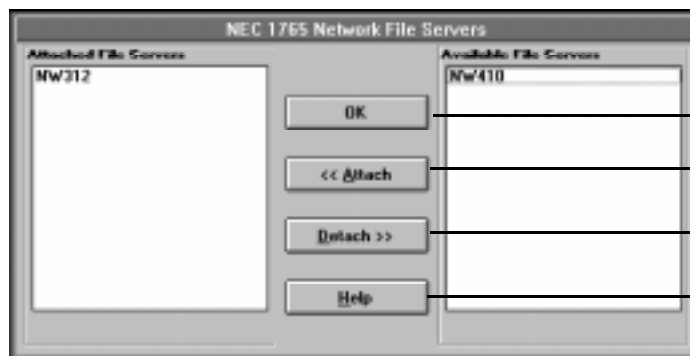
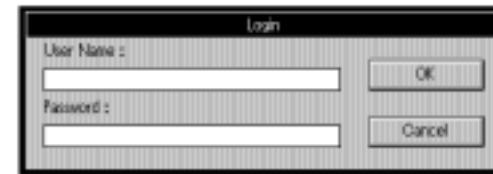
Available File Servers: Displays all available file servers. To attach to a file server, select the file server and select the **Attach** button. You will be able to login to the file server in the Login dialog box.

Login Dialog Box

The Login dialog box allows you to login to a file server.

Follow these steps to login.

1. Type your user name in the **User Name** text entry box.
2. Type your password in the **Password** text entry box.
3. Select the **OK** button.



- Closes this dialog box
- Displays Login dialog box to attach the selected file server
- Detaches the selected file server
- Opens online help about this dialog box

Printer Configuration Dialog Box

The Printer Configuration dialog box allows you to view and modify information about the current printer configuration. You can open the Printer Configuration dialog box by selecting the Printer Configuration menu from the Printer Client Access window or by selecting the Printer Configuration button in the Printer Client Access window.

The Printer Configuration dialog box displays the following information.

Printer Name: The name of the printer. The LAN card arrives with a default name of “NP_” followed by 6 digits, for example, NP_901715. You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the printer name.

Model Name: The model name of the printer.

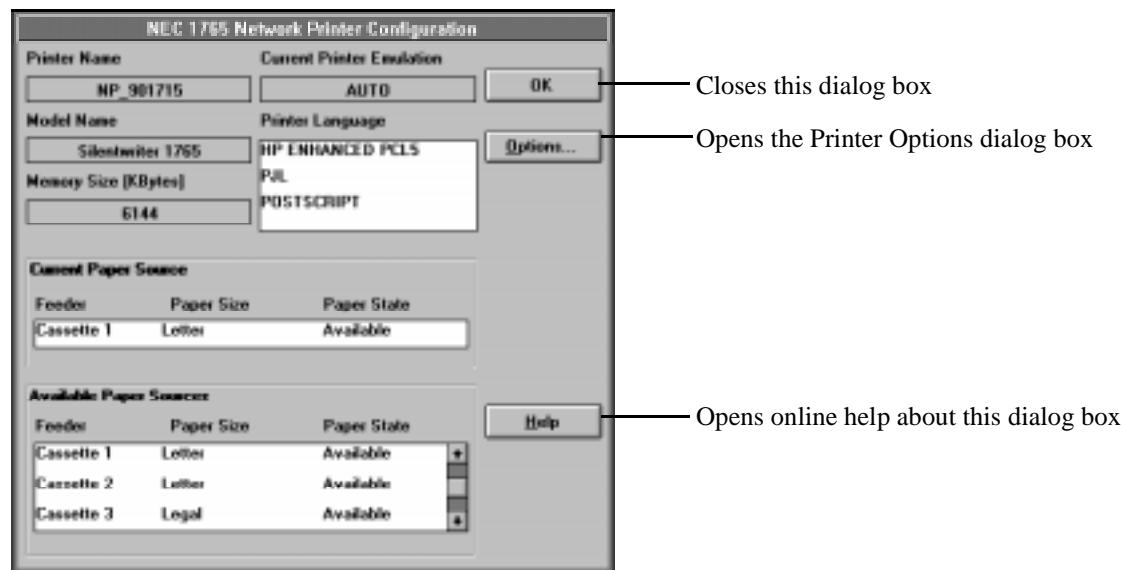
Memory Size: The total amount of memory, in kilobytes, installed in the Silentwriter. The Silentwriter can have from 4 to 54 megabytes of memory. Network printing requires at least 6 megabytes.

Current Printer Emulation: The currently selected printer language.

Printer Language: A list of printer languages that can be used with the printer. The Silentwriter recognizes PCL 5e and PostScript Level 2.

Current Paper Source: Displays which paper source has been selected, and the paper size for the selected source.

Available Paper Sources: Displays a list of the paper sources which can be used with the printer, the paper size for each source and the availability of paper.



Printer Options Dialog Box

The Printer Options dialog box opens when you select the Option button in the Printer Configuration dialog box. It displays information about which options are installed in the Silentwriter 1765. Available options include a hard drive, offset trays, up to two extra cassettes, an envelope feeder, and a duplex unit. If a hard drive is installed, the Printer Options dialog box displays its capacity in megabytes. The Printer Options dialog box displays the paper size for installed cassettes and the envelope feeder.



Closes this dialog box

About NEC 1765 Client Software Dialog Box

Select the **About** menu option from the Help menu or the **About** button in the Printer Client Access window to see which version of NEC 1765 Client software you are using.



Closes this dialog box

Minimized Icon Display

You can minimize the NEC 1765 software to display a desktop icon. This allows you to monitor the status of the Silentwriter while you complete other tasks. The minimized icon displays the printer name and a status message at the bottom of the icon. In addition, the icon may change from blue to red (alarm) depending on the severity of the message. See Appendix A, "Printer Messages," for a list of messages and their meanings.

note: If you are using Windows 95, the printer messages appear in the task bar. The status notes and color changes do not appear.

NEC 1765 Client Software for TCP/IP

The NEC 1765 Client software for TCP/IP allows you to display and modify configuration information for the NEC Silentwriter 1765. The following section describes specific tasks and the steps to complete them. For descriptions of NEC 1765 Client windows, dialog boxes, and menu options see page 6-14.

note: NEC 1765 Client depends on the TCP/IP Protocol. Make sure that the TCP/IP Protocol has been loaded and configured in Windows before running NEC 1765 Client. Your system administrator can help with this.

Using NEC 1765 Client Software for TCP/IP

This section describes the steps to perform specific tasks with NEC 1765 Client software for TCP/IP. Detailed information about NEC 1765 Client windows and menus starts on page 6-14.

Displaying Printer Status

You can display information about a current printer.

1. Open the NEC 1765 Client software.
2. Select the printer from the Network Printer list.
3. Look for the printer status information in the upper left corner of the Client Access window.

Changing the LAN Card Status Polling Rate

The LAN card status polling rate determines how often the NEC 1765 software requests updates from the LAN card. The rate is defined in seconds with a default value of 30 seconds and a range of 5 to 255 seconds.

1. From the Client Access window select the **Option** menu or the **Option** button.
2. The Option dialog box displays the current polling rate.
3. Type the new polling rate in the **Status Polling Rate** text box.
4. Select the **OK** button to save the new information and leave the Option dialog box
Or
5. Select the **Cancel** button to keep the old information and leave the Option dialog box.

Changing the LAN Card Response Timeout Time

The LAN card response timeout time defines how long the NEC 1765 software waits for an update from the LAN card before displaying an error message. The rate is defined in seconds with a default value of 5 seconds and a range of 5 to 255 seconds.

1. From the Client Access window select the **Option** menu or the **Option** button.
2. The Option dialog box displays the current response time.
3. Type the new response time in the **Response Timeout** text box.
4. Select the **OK** button to save the new information and leave the Option dialog box
Or
Select the **Cancel** button to keep the old information and leave the Option dialog box.

Displaying Error Messages

You can control how the NEC 1765 Client software displays error messages.

1. From the Client Access window select the **Option** menu or the **Option** button.
2. The Option dialog box displays the current response time.
3. Click in the **Display Error Window** check box to display errors messages in a separate dialog box.
4. Select the **OK** button to save the new information and leave the Option dialog box
Or
Select the **Cancel** button to keep the old information and leave the Option dialog box.

Displaying Silentwriter Printer Information

Silentwriter printer information includes the printer name, model name, total memory size, current printer emulation, available printer languages, current paper source, and available paper sources.

To see this information

1. Select the printer you want information about from the list of printers in the Client Access window.
2. From the Client Access window click the **Printer** button or select the **Printer** menu option from the Configure menu.
3. The Printer Configuration dialog box displays the information.
4. Select the **OK** button to leave the Printer Configuration dialog box.

Displaying Silentwriter Printer Options

To display which options have been installed in your Silentwriter, open the Printer Options dialog box.

1. Select the printer you want information about from the list of printers in the Client Access window.
2. From the Client Access window click the **Printer** button or select the **Printer** menu option from the Configure menu.
3. Select the **Options** button from the Printer Configuration dialog box.
4. Select the **OK** button to leave the Printer Options dialog box.
5. Select the **OK** button to leave the Printer Configuration dialog box.

Using Online Help

NEC 1765 software includes an online help system.

1. From the Client Access window select the **Help** menu or the **Help** button.
2. If you selected the Help menu, select the **Index** option.
3. Click a topic to display detailed information.
4. Click the Index button to return to the topic list.
5. Click the **Exit** button to leave the online help system.

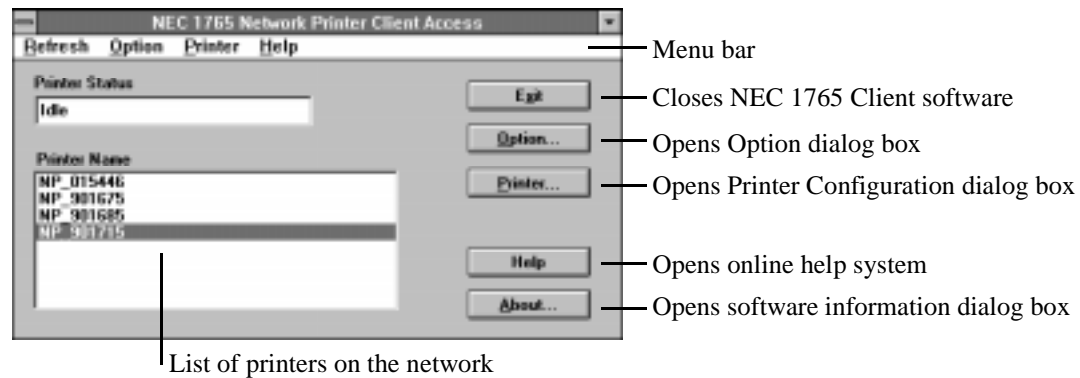
Client Access Window

Double-click the NEC 1765 Client software icon to open the software and move to the Client Access window.

The Client Access window includes the following information.

Printer Name: Displays the names of printers connected to the network.

Printer Status: Displays the status of the printer selected in the Network Printer box. See Appendix A, “Printer Messages,” for a list of status messages and their meanings.



Client Access Menu Bar

The menu bar in the Network Printer Client Access window provides the following options.

Refresh: Updates printer status.

Option: Displays the Option dialog box. This menu has the same function as the Option button.

Printer: Displays the Printer Configuration dialog box. This menu has the same function as the Printer button.

note: Select one of the printers in the printer list before selecting the Printer menu.

Help: displays the online help system. You have a choice of the following two options.

Index: Displays help menu.

About: Displays information about NEC 1765 Client software. This option has the same function as the About button.

Client Access Buttons

The buttons in the Client Access window allow you to select configuration options, access the help system and exit the NEC 1765 Client software. Many of these options are also available through the menu system.

Exit: Press this button to leave NEC 1765 Client software.

Option: Displays the Option dialog box for changing the LAN card polling rate and response time. This button has the same function as the Option menu.

Printer: Select this button to display the Printer Configuration dialog box. This button has the same function as the Printer menu option.

Help: This button allows you to access the online help system.

About: Display information about NEC 1765 Client software. This button has the same function as the About menu option on the Help menu.

Option Dialog Box

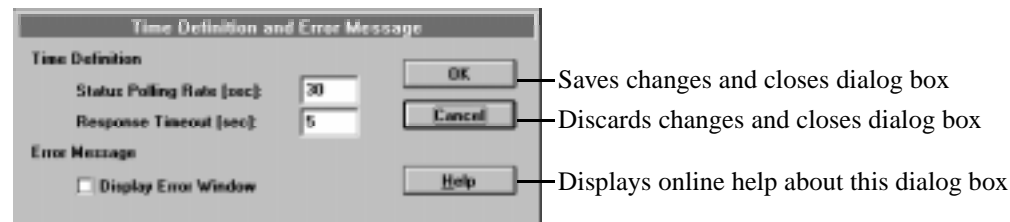
You can open the Option dialog box by selecting Option from the menu in the Client Access window or by selecting the Option button in the Client Access window.

The Option dialog box allows you to set the polling rate and timeout wait time.

Status Polling Rate: Sets the frequency in seconds with which the software verifies printer configuration and status. The range is 5 to 255 seconds and the default is 30 seconds.

Response Timeout: The amount of time in seconds that the NEC 1765 software waits for a response from the LAN card before generating a timeout. The range is 5 to 255 seconds and the default is 5 seconds.

Error Window Display Check box: This option controls the display of error messages when the software is displayed as a minimized icon. Select this item if you want to display error messages in an error dialog box.



Printer Configuration Dialog Box

The Printer Configuration dialog box allows you to view and modify information about the current printer configuration. You can open the Printer Configuration dialog box by selecting the Printer Configuration menu from the Client Access window or by selecting the Printer Configuration button in the Client Access window.

The Printer Configuration dialog box displays the following information.

Printer Name: The name of the printer. The Silentwriter arrives with a default name of "NP_" followed by 6 digits, for example, NP_901715. You may use any combination of upper-case alphanumeric characters, hyphens (-), and underscores (_) in the printer name.

Model Name: The model name of the printer.

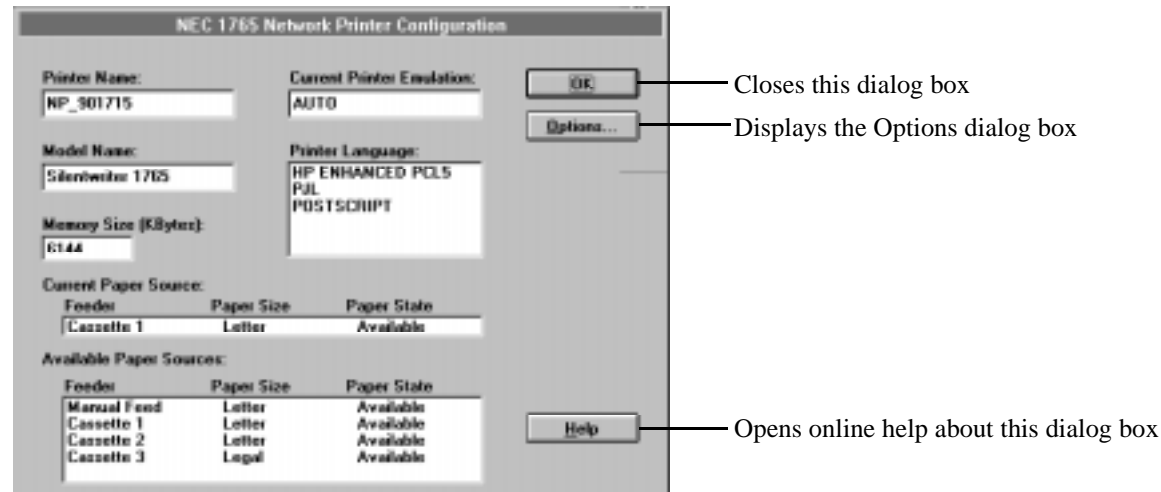
Memory Size: The total amount of memory, in kilobytes, installed in the Silentwriter. The Silentwriter can have from 4 to 54 megabytes of memory. Network printing requires at least 6 megabytes.

Current Printer Emulation: A list of printer languages that can be used with the printer. The Silentwriter recognizes PCL 5e and PostScript Level 2.

Printer Language: A list of available printer languages.

Current Paper Source: Displays which paper source has been selected, and the paper size for the selected source.

Available Paper Sources: Displays a list of the paper sources which can be used with the printer, the paper size for each source, and the availability of paper.



Options Dialog Box

The Printer Options dialog box opens when you select the Option button in the Printer Configuration dialog box. It displays information about which options are installed in the Silentwriter 1765. Available options include a hard drive, offset trays, up to two extra cassettes, an envelope feeder, and a duplex unit. If a hard drive is installed, the Printer Options dialog box displays its capacity in megabytes. The Printer Options dialog box displays the paper size for installed cassettes and the envelope feeder.



Closes this dialog box

About NEC 1765 Client Dialog Box

Select the About menu option from the Help menu in the Client Access window or the About button in the Client Access window to see which version of NEC 1765 Client software you are using.



Closes this dialog box

Minimized Icon Display

You can minimize the NEC 1765 software to display a desktop icon. This allows you to monitor the status of the Silentwriter while you complete other tasks. The minimized icon displays the printer name and a status message at the bottom of the icon. In addition, the icon may change from blue to red depending on the severity of the message. See Appendix A, "Printer Messages," for a list of messages and their meanings.

note: If you are using Windows 95, the printer messages appear in the task bar. The status notes and color changes do not appear.

Error Dialog Box

This dialog box displays error messages when the software is displayed as a minimized icon. This dialog box appears only if you have selected Error Window Display.

In addition to the error message, the dialog box includes the following information.

Printer Name: The name of the printer that generated the error message.

Printer Status: The current error message.

IF YOU NEED HELP 7



Overview

You can expect that your Silentwriter printer will provide outstanding printed documents. However, occasionally problems do arise. This chapter provides information about different resources for information and technical support, including

- How to reach NEC Technical Support by voice, fax, mail, and online for technical assistance
- How to obtain NEC service contracts

For more information about technical support see the *User's Guide*.

Assistance Nearby

Often, the best source for assistance is closer than you think. Before calling NEC, check out the options below.

Help From Within Your Company

If your organization is large and has purchased many NEC printers, the best source of assistance may be within your own company. Your company may have designated central support personnel that you can go to when you have any problems or when you need supplies such as paper or toner cartridges. These central support personnel can then contact the appropriate dealer or NEC support staff.

Help From Your Dealer

The dealer from whom you purchased your printer is backed by complete support resources and programs within NEC. Your dealer can provide you with details on all available support options.

NEC Technical Support

NEC technical support is available to answer your questions, Monday through Friday, 8:30 a.m. to 8:00 p.m., Eastern Standard Time.

Please have the following printer information ready when you contact NEC

- Model number
- Serial number
- Page count (shown on the printer test page)
- Date and place of purchase
- The type of network and network operating system you are using
- A configuration page
- Maintenance agreement number (if printer is already under agreement)

How to Contact NEC

There are a number of ways to contact us or receive information about technical issues, products, and services.

Contacting NEC Technical Support by Telephone

In the United States, the NEC toll-free number for printer technical support and repairs is 1-800-632-4650.

In Canada, call 1-800-268-4191 for technical support and repairs information in English. Call 1-800-268-4115 for technical support and repairs information in French.

Contacting NEC Customer Service by Telephone

In the United States and Canada, call 1-800-388-8888 to speak to a representative about new product sales, extended warranties, product literature, and customer service.

Sending Internet Electronic Mail

You can email your questions to us. NEC will respond within one business day. Send email messages to tech-support@necotech.com

Sending a Fax

You can fax questions or comments to NEC at 1-508-635-4890

Be sure to indicate the number where NEC can telephone or fax a response.

Using FastFacts—NEC's Information Retrieval System

NEC's technical support staff have created technical notes and tips for using NEC products. You can order these documents by touchtone menu and have them automatically sent to your fax machine.

To use NEC FastFacts, dial 1-800-366-0476

Follow instructions for ordering documents and providing your return fax number.

Reaching the NEC Bulletin Board System

You can use the NEC Bulletin Board System (BBS) to send messages and transfer files. The BBS number is 1-508-635-4706

Reaching NEC on Compuserve

Compuserve members can link to bulletin boards and transfer files to and from NEC. To reach the NEC section, type

GO NECTECH

Reaching NEC on America Online

Members of America Online can access the NEC support forum, obtain marketing information, transfer files, and send messages. To reach the NEC section, type the keyword

NECTECH

Reaching NEC on the World Wide Web

NEC's web site provides up-to-date product information and will eventually include links to NEC's FTP site and email address. Using your web browser, open this Uniform Resource Locator (URL) site:

<http://www.nec.com>

Writing NEC

You can mail your questions and comments to NEC Technical Support at the following address

Technical Support, Dept. #3390
NEC Technologies, Inc.
1414 Massachusetts Ave.
Boxborough, MA 01719

NEC Warranty and Service

Your Silentwriter 1765 printer comes with a one-year warranty. The 1765 printer also comes with a 90-day onsite service agreement. The complete warranty and repacking guidelines are provided in Appendix D. All repair requests must be pre-qualified by calling NEC Customer Service at 1-800-388-8888.

NEC Service Contracts

After the initial warranty period, fee-based technical support and service is available. NEC Customer Engineering and its dealers offer a complete range of services ranging from onsite repairs and maintenance to installation site planning. Several maintenance agreement programs are available to meet your needs and budget, including

- Onsite agreements on a yearly or multi-year basis which ensure priority response from NEC Customer Service and Support
- Volume onsite agreements that provide complete maintenance agreement management services for organizations with large numbers of NEC printers
- Per-incident repair services that include onsite service, mail-in service, or carry-in service to a local service dealer

To discuss an extended warranty or a service contract, or incidental repair, contact NEC Customer Service at 1-800-388-8888.

PRINTER MESSAGES A

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Printer Messages

The NEC 1765 software displays several printer messages. The following table lists those messages and their meanings.

Table A-1: Printer Messages

Message	Printer Status
Idle	The printer is operating normally and data receipt and printing are possible.
Off line	The printer is not connected, the power is off, the printer is not connected correctly, or the printer has been removed from Online status.
Cover Open	The cover of the unit is open.
Paper empty (Cassette 1)	
Paper empty (Cassette 2)	
Paper empty (Cassette 3)	
Warming Up	The printer is warming up.
Busy	The printer is busy.
Processing	The printer is processing a print request.
Printing	The printer is printing.
Engine Failure	There is a problem with the printer engine.
Controller Failure	There is a problem with the printer controller.
Not Responding	The printer is not responding.
Searching	The utility is searching for printers.

FLASH-ROM UPGRADE B



Overview

You can upgrade the firmware on the 1765 LAN card by installing a flash-ROM upgrade. Unlike other read-only memory, flash-ROM is rewritable. This appendix describes how to install flash-ROM firmware upgrades on the following systems.

- NetWare networks
- TCP/IP networks using ftp
- TCP/IP networks using FWTOOL on Windows 95 systems
- AppleTalk networks

To install a flash-ROM upgrade across a NetWare network proceed to page B-2.

To install a flash-ROM upgrade using ftp proceed to page B-3.

To install a flash-ROM upgrade using NEC's FWTOOL, an upgrade utility for Windows 95 systems proceed to page B-5.

To install a flash-ROM upgrade with AppleTalk proceed to page B-8.

Installing a Flash-ROM Upgrade With NetWare

You can upgrade the firmware on the 1765 LAN card by installing a flash-ROM upgrade. Unlike other read-only memory, flash-ROM is rewritable. This section describes how to prepare for and install a flash-ROM upgrade using NetWare.

Preparing to Install

You can not install a flash-ROM upgrade across LocalTalk. Remove any LocalTalk connections before performing a flash-ROM upgrade.

WARNING! During the flash-ROM upgrade LAN card settings restore to factory default values. Any changes you have made will be lost. Use NEC 1765 software to reconfigure the Silentwriter. Be sure to print a configuration page before installing the flash-ROM upgrade so you will know what values have been changed. To upgrade without restoring parameters without factory defaults, use FWTOOL to perform firmware upgrades. See “Installing a Flash-ROM Upgrade With FWTOOL” on page B-5.

Installing the Upgrade in NetWare

1. Insert the diskette containing the flash-ROM upgrade in the drive. (This example will use drive a:.)
2. Log in to NetWare with supervisor privileges.
3. Move to the public directory and run PCONSOLE.
`cd public`
`PCONSOLE`
4. In the Available Options menu select **Print Queue Information**. The Print Queues menu opens.
5. In the Print Queues menu select the queue for the printer you wish to upgrade. The Print Queue Information window opens.
6. In the Print Queue Information window select the **Current Print Job Entries** option to open the queue window.
7. Once the queue window is empty (all pending print jobs are complete), press the **Insert** key.
8. In the **Select Directory to Print From** window enter the directory name for the download file. In this example the directory is a: \.
9. In the Available Files window select the firmware upgrade file. It will have the format `<file name>.dld`.
10. In the Print Job Configuration window select **PCONSOLE Defaults**.
11. In the New Print Job to be Submitted window make sure **File Contents** is set to byte stream.
12. Set the **Target Server** to the printer you wish to upgrade.
13. Turn off **Print Banner**.
14. Turn the printer off, then on again.
15. Press **Escape** to leave the Print Job Configuration window. Select **Yes** when the Save Changes window opens.
16. The firmware file appears in the queue window. When the firmware upgrade is complete print a configuration page to confirm the new firmware version. The firmware release number is shown at the top of the configuration page.
17. Press **Escape** four times to leave PCONSOLE.
18. Click **Yes** to exit PCONSOLE.
19. Use NEC 1765 software to restore LAN card settings.

Installing a Flash-ROM Upgrade With ftp

You can upgrade the firmware on the 1765 LAN card by installing a flash-ROM upgrade. Unlike other read-only memory, flash-ROM is rewritable. This section describes how to prepare for and install a flash-ROM upgrade using ftp.

Preparing to Install

Before you install a flash-ROM upgrade, you need the following

- You need a copy of ftp, the file transfer protocol software. Ftp is included with Windows for Workgroups, Windows 95, and Windows NT.
- You need to know the LAN card's IP address, which is printed on the configuration page. See "Print a Configuration Page" on page 2-13.
- You can not install a flash-ROM upgrade across LocalTalk. Remove any LocalTalk connections before performing a flash-ROM upgrade.

WARNING! During the flash-ROM upgrade LAN card settings restore to factory default values. Any changes you have made will be lost. Use NEC 1765 software to reconfigure the Silentwriter. Be sure to print a configuration page before installing the flash-ROM upgrade so you will know what values have been changed. To upgrade without restoring parameters to factory defaults, use FWTOOL to perform firmware upgrades. See "Installing a Flash-ROM Upgrade With FWTOOL" on page B-5.

Installing the Upgrade in Windows 95

1. Disconnect the LocalTalk connection.
2. Turn the printer off, then on again.

3. Insert the diskette containing the flash-ROM upgrade in the drive. (This example will use drive a:.)
4. Click the **Start** menu. From the Programs submenu select **MS-DOS**.
5. If the printer is on a different segment than the host, make sure the printer has an entry in the routing table. Use the `route add` command as follows
`route add <printer IP> <host IP>`
 Some operating systems require a 0 after `<host IP>`. Check with your system administrator.
6. Type `ftp` at the DOS prompt to run ftp.
7. At the ftp prompt type
`open <IP address>`
 where `<IP address>` is the IP address of the Silentwriter.
8. Ftp will prompt you for a user login. Press enter to accept the default value (none).
9. At the ftp prompt type
`binary`
 to set the data transmission mode to binary.
10. At the ftp prompt type
`put a:\<filename>`
 where `<filename>` is the name of the file containing the new firmware.
11. When the transfer is complete type
`quit`
 to leave ftp.
12. Type `exit` at the DOS prompt to return to Windows 95.
13. Print out a new configuration page by pushing the configuration button to confirm that the firmware upgrade was successful. The firmware release number is shown at the top of the configuration page.
14. Use NEC 1765 software to restore LAN card settings.

Installing the Upgrade in Windows for Workgroups

1. Disconnect the LocalTalk connection.
2. Turn the printer off, then on again.
3. If the printer is on a different segment than the host, make sure the printer has an entry in the routing table. Use the `route add` command as follows
`route add <printer IP> <host IP>`
Some operating systems require a 0 after *<host IP>*. Check with your system administrator.
4. Insert the diskette containing the flash-ROM upgrade in the drive. (This example will use drive a:)
5. Open the **FTP** icon in the Microsoft TCP/IP-32 program group.
6. At the ftp prompt type
`open <IP address>`
where *<IP address>* is the IP address of the Silentwriter.
7. Ftp will prompt you for a user login. Press enter to accept the default value (none).
8. At the ftp prompt type
`binary`
to set the data transmission mode to binary.
9. At the ftp prompt type
`put a:\<filename>`
where *<filename>* is the name of the file containing the new firmware.
10. When the transfer is complete type
`quit`
to leave ftp.
11. Print out a new configuration page by pushing the configuration button to confirm that the firmware upgrade was successful. The firmware release number is shown at the top of the configuration page.
12. Use NEC 1765 software to restore LAN card settings.

Installing a Flash-ROM Upgrade With FWTOOL

If your workstation uses Windows 95, you can use FWTOOL to upgrade the firmware on the 1765 LAN card by installing a flash-ROM upgrade. Unlike other read-only memory, flash-ROM is rewritable. This section describes how to prepare for and install a flash-ROM upgrade using FWTOOL.

Preparing to Install

- You can not install a flash-ROM upgrade across LocalTalk. Remove any LocalTalk connections before performing a flash-ROM upgrade.
- FWTOOL can display a maximum of 32 printers.
- FWTOOL cannot update firmware across a router. You must use a PC that is in the same network segment as the printer to install a flash-ROM upgrade.
- FWTOOL allows you to upgrade the LAN card's firmware without restoring LAN card parameters.

Unloading the Software

Your upgrade consists of a diskette containing the file FWTOOL.EXE. FWTOOL.EXE is a self-expanding file containing the software and data files you will need to install a flash-ROM upgrade. Follow these steps to load the upgrade software on your hard drive.

1. Insert the diskette containing the software upgrade in the appropriate drive.
2. Create a new folder on the desktop of your PC.
3. Copy the FWTOOL.EXE file from the diskette to the new folder on your desktop.
4. Double click FWTOOL.EXE to expand it.

FWTOOL.EXE expands into three files, described below.

FW.EXE: This is the utility that installs the upgrade.

NICFW.INF: This file contains a list of compatible firmware files and the current firmware version number.

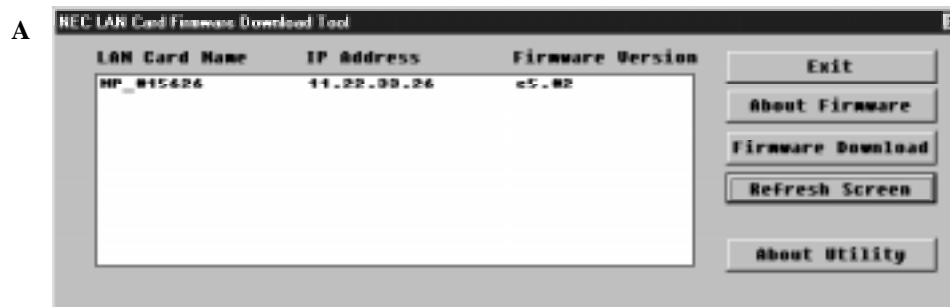
<firmware>.DLD: This file contains the new firmware. This example uses the firmware file 183e502k.DLD.

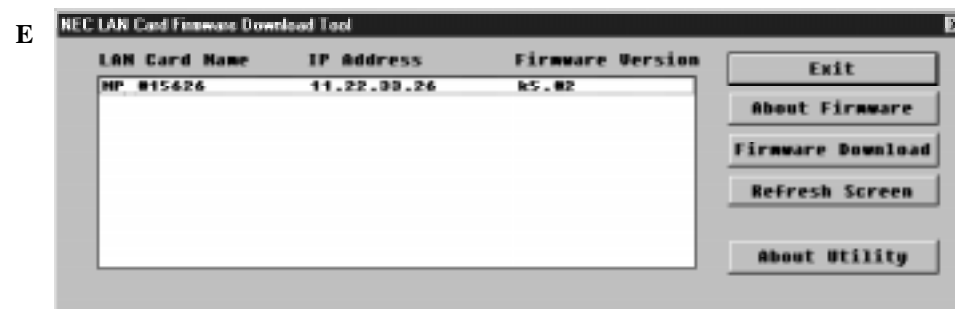
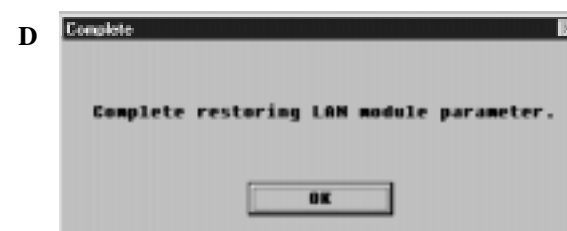
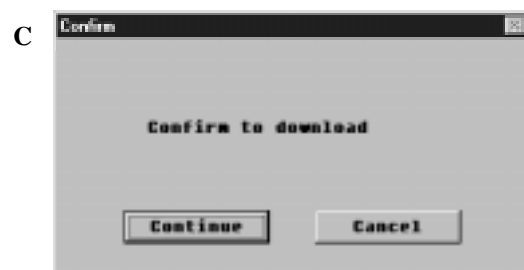
Now you are ready to install the upgrade as described on the next pages.

Installing the Upgrade

The steps to install the firmware upgrade are described below and illustrated below and on the facing page.

5. Double click the file `FW.EXE` to execute it. The main window will show a list of printers by name and IP address and the firmware version each printer is running. Select the printer you wish to upgrade **(A)**.
6. Before performing the upgrade you can check the current and new version of the firmware by clicking the **About Firmware** button in the main window **(B)**. Click the Close button to leave the Firmware Version window.
7. To perform the download click the **Firmware Download** button in the main window.
8. After the software opens a connection to the printer, it asks you to confirm that you wish to perform this upgrade. Click the **Continue** button to proceed **(C)**.
9. The software proceeds with the download. As the firmware upgrade is completed the printer prints a confirmation sheet saying that network printer settings have been changed to their factory default values.
10. After the firmware has been upgraded, the software asks you if it should restore any custom network printer settings. Click **OK** to continue **(D)**. The software restores all network printer settings to their custom values.
11. At the main window you can click **Exit** to leave the software or select another printer to continue upgrading firmware **(E)**.





Installing a Flash-ROM Upgrade with AppleTalk

You can upgrade the firmware on the 1765 LAN card by installing a flash-ROM upgrade. Unlike other read-only memory, flash-ROM is rewritable. This section describes how to prepare for and install a flash-ROM upgrade using NetWare.

Preparing to Install

Before you install a flash-ROM upgrade, you will need the following.

- You will need to know the LAN card's AppleTalk zone and Printer Name, which are printed on the configuration page. See "Print a Configuration Page" on page 2-13.
- You can not install a flash-ROM upgrade across LocalTalk. Remove any LocalTalk connections before performing a flash-ROM upgrade.

WARNING! During the flash-ROM upgrade LAN card settings restore to factory default values. Any changes you have made will be lost. Use NEC 1765 software to reconfigure the Silentwriter. Be sure to print a configuration page before installing the flash-ROM upgrade so you will know what values have been changed.

Installing the Upgrade across AppleTalk

You can install the upgrade using any utility that allows you to send a PostScript file directly to the Silentwriter. This example uses Apple Printer Utility version 2.0.

1. Confirm that your computer is using EtherTalk by opening the **Network Control Panel** and highlighting the EtherTalk icon. Close the Network Control Panel.
2. Disconnect LocalTalk.
3. Turn the printer off, then on again.
4. Open the **Apple Printer Utility** icon. Usually it is located in the Apple LaserWriter Software folder.
5. In the Printer Selector window select the correct AppleTalk zone and printer. Click the **Open Printer** button.
6. In the Printer window select the **Send Postscript File** option from the File menu.
7. Select the firmware file and click the **Send** button.
8. You may specify any log file or accept the default log file.
9. After the download, Apple Printer Utility loses the connection with the Silentwriter because the upgrade restores factory default settings. Click the **Stop** button to stop waiting for the printer connection.
10. Select the **Quit** option from the File menu.
11. Print out a new configuration page by pushing the configuration button to confirm that the firmware upgrade was successful. The firmware release number is shown at the top of the configuration page.
12. Use NEC 1765 software to restore LAN card settings to their custom values.

GLOSSARY



10Base2 See Ethernet 10Base2.

10BaseT See Ethernet 10BaseT.

8-pin serial interface A connector on the printer you use to attach a LocalTalk cable from your Macintosh computer.

Address Resolution Protocol The TCP/IP protocol used to dynamically bind a high-level IP address to a low-level physical hardware address.

alert message A message on the printer operator panel or in the Printer Monitor that occurs when printing is suspended. See also: status message.

AppleTalk A network protocol designed by Apple and used to link Macintosh computers and peripherals.

application A software program that performs a specific task such as creating a spreadsheet, a text document, or graphics.

ARP See Address Resolution Protocol

ASCII American Standard Code for Information Interchange. A coding used to represent text in digital computing.

baud The rate of data transmission, measured in bits per second.

bitmap A checkerboard dot-by-dot representation of a text character or graphic image.

cassette feeder The mechanism that holds a paper cassette and feeds paper into the printer.

Chooser A desk accessory on the Macintosh system you use to designate external resources such as file servers and network printers.

click To press and release the mouse button at the location you want an action to take place.

default A setting that is automatically used by the printer unless you change it.

dialog box A user interface displayed on the monitor screen that contains a message or requests information from you and allows you to enter the response.

DLC Protocol The network protocol used by Microsoft and IBM networking products, including Microsoft LAN Manager, Windows NT, Windows for Workgroups, and IBM LAN Server

DOS Disk Operating System.

double-click To press and release the mouse button twice rapidly at the location you want an action to take place.

driver see printer driver

Ethernet 10Base2 A physical cabling system (coaxial thin wire) used to link computers and peripheral devices in an Ethernet network system.

Ethernet 10BaseT A physical cabling system (unshielded twisted pair) used to link computers and peripheral devices in an Ethernet network system.

file Any named, ordered collection of information stored on a disk.

file transfer protocol The TCP/IP standard, high-level protocol for transferring files from one machine to another.

firmware Programs stored permanently in read-only memory (ROM). Such programs are built into the printer at the factory. They can be executed at any time, but only flash-ROM can be modified or erased from memory.

flash-ROM ROM which can be rewritten.

frame A packet of information transmitted across an Ethernet network.

ftp See file transfer protocol.

hex dump A printer mode in which all data is output in hexadecimal format.

hot-key A combination of keys on your computer keyboard that you press at the same time to execute a command or launch an application.

HP-GL/2 A printer programming language for graphics developed by Hewlett-Packard.

icon A small graphic image that is a placeholder for a program, file, or command. Often you select the icon to access the item it represents.

IEEE 802.2, IEEE 802.3 The Institute of Electrical and Electronic Engineers 802 standards committee standardizes network technologies. IEEE 802.3 is the 802 standard that most closely resembles Ethernet.

indicator lights LED lights on the printer operator panel that communicate the current printer status.

IPXODI NetWare network operating systems uses the IPXODI.COM program to deliver data packets across a NetWare network.

KB An abbreviation for kilobyte, i.e., roughly one thousand bytes.

LAN See Local Area Network

LAN card The part of the printer that communicates with the network.

LCD Liquid Crystal Display.

LED Light Emitting Diode

local area network Any physical network technology designed to span short distances, up to a few thousand meters.

LocalTalk A physical cabling system used to link computers and peripheral devices in a Macintosh network system.

LocalTalk connector A piece of equipment consisting of a small box with a built-in cable that links a device to a LocalTalk cable system.

MAC Address A unique network identifier.

Macintosh A line of computers, computer products, and peripheral devices produced by Apple Computer, Inc.

Media Access Control Address See MAC Address

MB An abbreviation for megabyte, i.e., one million bytes.

MS-DOS See DOS.

NetWare Loadable Module A program which can be loaded and unloaded from NetWare server memory while the server is running.

NLM See NetWare Loadable Module

network A system (and any software that supports it) linking computers and peripheral devices.

network operating system Computer software that controls the basic operations of a network.

NOS See network operating system.

ns nanosecond

offline The state in which the printer cannot accept or print out data.

online The state in which the printer can accept and print out data.

operating system The computer program or group of programs that controls the basic operation of the computer and its peripheral devices.

parallel interface An interface that uses multiple data circuits. It is usually faster than serial ports and may also support bidirectional communication between devices.

PCL Printer Command Language. An escape code printer language developed by Hewlett-Packard.

PCL 5e A version of Hewlett-Packard's Printer Command Language—an escape code printer language. PCL 5e is one of the printer languages emulated by the Silentwriter 1760/1765. The other is PostScript Level 2, which is a page description language.

PDL Page Description Language. A printer language, such as Adobe's PostScript, that describes pages of text and graphics.

peripheral device Any device (such as a printer) that you attach to and operate with your computer.

ping A program used with TCP/IP networks to test the reachability of destinations by sending them a request and waiting for a reply.

point A unit of measurement for sizing type. One point equals 1/72 inch.

port A socket on the connector panel of a computer or peripheral device where you can plug in a cable to connect to another computer or device, or to a network.

PostScript Level 2 A page description language developed by Adobe that controls the placement of text and graphics on a page. PostScript Level 2 is one of the printer languages emulated by the Silentwriter 1760/1765. The other is PCL 5e, which is a printer command language.

PostScript Printer Description file A file which describes device-specific characteristics for a PostScript device.

PPD See PostScript Printer Description File

Print Monitor The user interface for monitoring the status of a print job from the computer display.

printer driver A software file that translates printer commands.

printer language The generic term for a language that the printer uses to interpret instructions for placing text and graphics on a page. For example, the Silentwriter 1760/1765 can interpret information by emulating the PCL 5e printer command language, the PostScript page description language, or the HP-GL/2 graphics language.

printer software Software you install on your computer to allow you to control the printer from your computer.

protocol A formal description of message formats and the rules two or more machines must follow to exchange those messages.

RAM Random-access memory. Memory in which information can be accessed in an arbitrary manner. This memory can be written to and read from but is lost when power is turned off or lost.

ROM Read-only memory in the printer. Its contents can be read but not changed and are retained even after power is turned off or lost. See also: firmware, flash-ROM.

select Marking a file, program, or folder so that the next action will apply to that item.

SIMM Single Inline Memory Module. Units of random access memory (RAM) that can be installed on your printer.

Simple Network Management Protocol The most popular network management protocol for TCP/IP networks. Simple Network Management Protocol lets TCP/IP sites exchange information about the configuration and status of a node's TCP/IP protocol stack.

SNMP See Simple Network Management Protocol

status display The LCD display on the operator panel of the printer that shows status and alert messages.

status message A message on the operator panel of the Silentwriter printer that communicates the current operating status of the printer. See also: alert message.

TCP/IP Transmission Control Protocol/Internet Protocol. A computer network communications standard. Commonly used with UNIX.

WAN See Wide Area Network

wide area network Any physical network technology that spans large geographic distances.

Windows An operating system developed by Microsoft. It is an application that runs under DOS and implements a user interface that has windows, icons, and menus.

Wizard An interface provided by Windows to simplify system or network configuration.

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